# INTERNATIONAL ASSOCIATION OF NITROX AND TECHNICAL DIVERS (IAND, INC./IANTD)

# STANDARDS AND PROCEDURES MANUAL

FOR RECREATIONAL DIVING INCLUSIVE OF SPORT AND TECHNICAL DIVING



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IAND, Inc. / IANTD wishes to thank all of the members of the BOA both past and present for their contributions to these Standards. While some leaders in the diving world have decided to receive the honor of Emeritus BOA member, their contributions are noted fully and their assistance in development of these Standards and to diving are very much appreciated and respected.

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# **IANTD World Headquarters**

www.iantd.com E-mail iantd@iantd.com

#### IANTD Australasia

(Australia & New Zealand) ATT: Barrie & Andrea Heard 24 Invermay Rd West, Ripplebrook, VIC 3818 Australia Tel 61-3-5627 6474 Fax 61-3-5627 6441 E-mail iantd@dcsi.net.au

#### IANTD Benelux

(Austria, Belgium, Netherlands, Luxemburg, Monaco and Switzerland \*except Ticino) ATT: Paul Lijnen; Waterlozestraat 48 Hasselt 3511 Belgium Tel 32-11-241145 Fax 32-11-231134 E-mail paull@iantdbenelux.com

#### IANTD Brazil

ATT: Luis Pedro & Hilmar Becker Rua Piracuama, 262 apt. 11 Cep.: 05017-040 São Paulo, S.P., Brazil Tel.: (5511) 3542-6707 E-mail info@iantd.com.br

#### IANTD Central America

(Central America, Cuba and Mexico) ATT: Scott Carnahan and Andreas W Matthes; Calle 4 Entre Avenida 25 Y 30 Centro, Playa del Carmen, Quintana Roo, Mexico 77710 Tel 52-984-803-1168 Fax 52-984-873-2046 E-mail info@iantdmexico.com

#### IANTD Central Europe

(Czech Republic, Hungary, Poland and Slovak Republic) ATT: Alexander Mikula Gollova 536/1, 108 00 Praha 10, Czech Republic Tel 420-603-433023 Fax 420-2-242-34586 E-mail iantd@iantd.cz

#### IANTD China

ATT: Paul & Lorraine Neilsen 8 Shum Wan Road, Aberdeen, Hong Kong, China Tel 852-2554-7110 Fax 852-2554-7121 E-mail info@mandarin-divers.com

#### IANTD Eastern Mediterranean

(Albania, Cyprus, FYROM, Greece, Jordan, Malta, Syria and Turkey.) ATT: Alexander & Vangelis Sotiriou; 33 Taxilou Street, Athens 157 71 Greece Tel 30-1-7705470 Fax 30-1-7755070 E-mail iantdgr@otenet.gr

#### IANTD Egypt

ATT: Zbynek Hrdina Sea Gull Resort, Sheraton Road, Hurghada, Egypt Tel 20-12-425-7661 Fax 20-65-440245 E-mail info@iantd-egypt.com

#### IANTD Finland

ATT: Egil Österholm Rusthollarinkatu 8, FIN-02270 Espoo, Finland Tel 358-0-613-316 Fax 358-0-613-31800 E-mail iantd.finland@polarsukellus.fi

#### IANTD France

 (New Caledonia, Mayetta, Tahiti, Tunisia, Algeria, Morocco, French Polynesia, Martinique, Guadeloupe) ATT: Jean Pierre Imbert
 61 Chemin de Morgiou 13009 Marseilles, France Tel/Fax 33-04-93-61-7150 E-mail iantdfrance@wanadoo.fr

#### IANTD Germany

ATT: Frank Gottschalch Im Scheidter Garten 14, Hamm / Sieg, 57577 Germany Tel 49-268- 296-8856 Fax 49-268- 296-8857 E-mail info@iantd-germany.de

#### IANTD Ireland

(Southern Ireland) ATT: Tim Doyle & Kevin Seagrave, IANTD(Irl) Ltd. Atlantic Shore, Newtown, Bantry, Co. Cork Ireland Tel 353-1-8733044 Fax 353-1-8733969 E-mail iantdirl@eircom.net

#### IANTD Israel

ATT: Sani Sanievich; Yordei Yam 1, Marina Herzelia, 46764 Israel Tel 972-9-9517616 Fax 972-9-9569725 E-mail sani\_1@netvision.net.il

#### IANTD Italy

(Italy, Croatia, Bosnia, Slovenia, Ticino \* a part of Switzerland) ATT: Fabio Ruberti & Carla Binelli Via Pietro Moriconi 63, Marina Di Pisa 56013 Italy Tel 39-050-35601 Fax 39-050-35535 E-mail fabio.ruberti@tiscalinet.it

#### IANTD Japan

ATT: Yuichi Osawa & Shizutaka Yamamoto 1-15-4 Hamamatsucho, Minato-Ku, Tokyo, Japan Tel 81-3-5776-7771 Fax 81-3-5472-2759 E-mail info@iantd.co.jp

#### IANTD Korea

ATT: Kwang Hwi Kim 434-17, Seongnae-dong, Gangdong-gu,, Seoul, Korea Tel 82-2-486-2792 Fax 82-2-486-2792 E-mail iantd@iantd.co.kr

#### IANTD Latina

(Puerto Rico, Argentina, Venezuela, Colombia, Chile, Peru, Bolivia & Paraguay) ATT: Wally Barnes 15901 SW 82nd Ave., Miami, Florida, USA 33157-2224 Tel: 305-253-2664 Fax: 305-253-2664 E-mail iantdlatina@aol.com

#### IANTD Lebanon

ATT: Walid Noshie, Scuba Station Hamra Street, PO Box 113-6691, Beirut, Lebanon Tel 961-320-4422 Fax 961-173-9206 E-mail info@iantd-lebanon.com

#### IANTD Nordic

(Norway, Sweden & Denmark) ATT: Michael Hansson Svestadvn 27,1458 Fjellstrand, Norway Tel 47-48-001387 Fax E-mail michael.hansson@iantd.no

#### IANTD Philippines

ATT: Alex Santos 1419-B Pablo Ocampo Sr. Avenue, Makati 1203 Philippines Tel 63-2-734-3929 Fax 63-2-734-3928 E-mail iantd-rp@mydestiny.net

#### IANTD Russia

(Armenia, Azerbaijan, Belarus, Bulgaria, Estonia, Georgia, Kazakhstan, Kyrghizstan, Latvia, Lithuania, Moldova, Tajikistan, Turkmenistan, Ukraine and Uzbekistan) ATT: Sergei Volnuhin & Vladimir Timofeev Krasina #9, Build 2, Enter 5a, Moscow, Russia Tel 7-499-766-2368 Fax 7-495-209-7474 E-mail postmaster@iantd-russia.com

#### IANTD South Africa

(South Africa, Mozambique, Madagascar, Mauritius, Reunion, Botswana, Namibia, & Zimbabwe) ATT: Don Shirley PO Box 608, Badplaas 1190 South Africa Tel 27- 82- 650- 2279/94 Fax 27-17- 844-1176 E-mail general@technicaldivingafrica.com

#### IANTD South East Asia

(Singapore, Indonesia, Malaysia, Thailand, Taiwan & Republic of Maldives) ATT: Khoo Soo Seng 196 Pandan Loop #07-08, "PanTech" Industrial Complex, Singapore 128384 Republic of Singapore Tel 65-6776-7227 Fax 65-6773-3239 E-mail khooss@singnet.com.sg

#### IANTD Spain

ATT: Armin Sidali C/San Valentin, 8 (Edif. Balandro) 6°F; Edificio Balandro Mijas-Costa, 29649 Malaga, Spain Tel 34-618-85-58-07 Fax: 34-1517-5809 E-mail armin@iantdspain.com

#### IANTD United Kingdom

(England, Scotland, Wales & Channel Islands) ATT: Simon Pridmore PO Box 6046, Wimborne, Dorset BH21 9AH UK Tel 44-1202- 840366 Fax 44-1202- 625308 E-mail iantdpro@aol.com

#### IAND, Inc. / IANTD International Emeritus Board of Advisors

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Neither the authors nor the Board of Directors, Board of Advisors, or any party associated with the International Association of Nitrox Divers, Inc./IANTD will accept responsibility for accidents or injuries resulting from use of the materials contained herein or the activity of SCUBA diving utilizing open, closed and/or semi-closed circuit equipment or breathing compressed air, or alternative breathing mixtures, including combinations of Oxygen, Nitrogen, Helium and/or Neon.

SCUBA diving, including the use of compressed air and any gas mixture underwater, is an activity that has inherent risks. An individual may experience injury that can result in disability or death. Variations in individual physiology and medical fitness can lead to serious injury or death even with adherence to accepted standards of performance, specified oxygen limits, and the correct use of dive tables and computers. All persons who wish to engage in scuba diving must receive instruction from a certified instructor and complete nationally recognized requirements in order to be certified as a scuba diver. The use of alternative breathing mixtures, such as combinations of Oxygen, Nitrogen, Helium and/or Neon, requires additional instruction beyond that offered in traditional recreational SCUBA diving courses.

Trained and certified SCUBA, using compressed air or alternative breathing mixtures, are informed of the risks associated with SCUBA diving and utilizing breathing mixtures as described and ultimately bear responsibility for their own actions. Persons must not engage in scuba diving and the use of compressed air or alternative breathing mixtures, if they are unwilling to complete a course of instruction, pass certifying examinations and evaluations, maintain their skill and knowledge through active participation in diving activities, and accept responsibility for any injury or death that may occur when participating in SCUBA diving activities.



#### IAND, Inc. / IANTD STANDARDS & PROCEDURES MANUAL Sixteenth edition, December 1, 2006

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"The Leader in Diving Education"

Technical Wreck Diver Instructor	1985-2006 "21 Years of Excellence"
Normoxic Trimix Instructor	
CCR Normoxic Trimix Instructor	
Trimix Instructor	
CCR Trimix Instructor	
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# IAND, INC. / IANTD GENERAL STATEMENT OF OBJECTIVES

IANTD's mission is to explore the opportunities and challenges of Recreational Diving, which includes all forms of Sport Diving, Nitrox, Advanced and Technical diving, in order to foster openness and individual responsibility, and to provide a standard of care for instruction in the diving community. IANTD and its members strive to be honest, ethical and fair in all our venues. We also believe that there are universal principles that are more absolute. We try to live by them. We envision our mission activities in the following areas:

- **PUBLIC AWARENESS AND ADVOCACY:** IANTD is working to promote openness in the diving community; to share procedures, techniques and operational methods with divers seeking to expand their diving experiences. In the interest of safer diving we encourage freedom with discipline allowing for development of new methods and procedures but recognizing the need for an accepted safety envelope. IANTD will stay informed on diving developments and include them in its diving activities.
- **SAFER DIVER PROGRAM:** IANTD believes individual diver responsibilities are developed through rigorous skill refinement and experience in the water. Vigorous instruction with a strong student / Instructor relationship, enhancing a transfer of the diving responsibility to the student, is the essence of our teaching philosophy.
- **PROGRAM DEVELOPMENT AND REFINEMENT:** IANTD has developed Programs to increase diving knowledge and skill levels. We will continue refining these Programs, based on reports from Instructors in the field, to improve and strengthen their value to our membership. We will continue to develop a set of core values that apply to sport and technical diving. IANTD Standards and Procedures have been developed and have evolved to allow worldwide recognition of skill and knowledge at each qualification level addressed by IANTD.
- **FOSTERING COMMUNITY:** Much of the work IANTD has done has been directed at fostering a sense of community in the diving world. The diving community, by virtue of its size, needs internal cooperation to prosper and grow; anything less is counter-productive.

# IAND, INC. / IANTD TRAINING PHILOSOPHY

# IAND, Inc./IANTD believes it is better to be cautious and demanding in training than to have even one accident. IAND, Inc./IANTD is dedicated to producing knowledgeable and skillful divers. Both are key for developing competent, confident and relaxed divers, who can fully enjoy the exhilarating experiences of sport and technical diving.

- KNOWLEDGE and UNDERSTANDING are, beyond a doubt, the keys to power in any endeavor one undertakes. In diving, the combination of knowledge and understanding provides greater diving safety
- IANTD designs all Program materials to instill in-depth knowledge to the student and practitioner of sport and technical diving endeavors. This knowledge develops greater confidence and understanding of both the enjoyment and risk aspects of safe diving.
- To ensure a sound knowledge base, IANTD is demanding on the subject material presented in its Programs.
- SKILLS and STRESS MANAGEMENT are important in performance of safe dives and in the ability to survive during stressful events.
- IANTD Programs are designed to develop superb water skills and relaxed and comfortable divers. To achieve this, techniques are taught and drills are incorporated that enable divers to realize their full potential. The confidence developed in this type of training will reward students by allowing them to become self-confident and self-reliant divers.
- Equipment familiarity exercises, such as simulation of a gas failure with valve shutdowns to practice regulator switches, are included to allow divers to become confident and capable in reaching and manipulating the valves and in performing regulator switches. To the amazement of many students, this is often difficult on the first few attempts. Indeed, equipment adjustments are often needed to enhance the performance of this skill. This is a skill that may save a diver's life someday, and one in which all divers need to be confident with. This type of confidence is developed by demonstration and practice.
- Stress management exercises are placed into our Programs to simulate realistic diving emergencies. The purpose of these exercises is to train divers in response awareness, and to develop in their minds a memory of having experienced a similar event before. One example of such a drill is to swim to a buddy over a prescribed distance without breathing, and then commence gas sharing followed by a timed swim. To some, this appears as a fitness or harassment drill. In fact, it is a confidence-builder and a mind conditioning exercise. It provides a rehearsed response to an emergency to develop mental stamina instead of an on-site challenge. The distance involved is similar to what one would likely encounter when swimming to a companion diver, while communicating the problem and the need to initiate gas sharing. The timed-swim is designed to instill a reaction of maintaining a normal swim pace to enable gas consumption to remain at a normal rate.
- IANTD believes confidence and efficiency are developed by spending time in the water. All Programs specify required minimum minutes of bottom time to be accomplished within a certain number of dives. IANTD is the first to incorporate this into diver training.
- IANTD believes basic survival skills must be practiced to enable one to better cope with stressful events
- IANTD recognizes that many skills in its Programs are redundant. Provisions are allotted to credit diver training amongst Programs.
- IANTD values experience and its Standards have provisions for credit of equivalent experience towards a given level of qualification. At the same time, we all realize that experience is not always compatible with knowledge and skill performance. To provide a marriage of experience, knowledge and skill performance, divers must demonstrate the required skills and knowledge appropriate to the level they are being credited for, prior to qualification at a higher level of diving.
- IANTD believes that our Instructors do set the example. To this end, the Instructor must always be present in the water providing direct or indirect supervision of the dive; demonstrating overall good diving skills while providing an extra element of safety in the water. At the same time, the Instructor must take care that the student does not depend upon them. They must ensure confidence is being developed. Teaching Assistants may be responsible for any needed indirect supervision and control provided that the Instructor is present on the dive.
- IANTD requires the Instructor in charge to be present in the water and provide direct or indirect supervision if a teaching assistant is to provide direct supervision of students on their first dive to a new and greater depth, and to discourage students from exceeding the prescribed limits of the Training Program they are participating in.
- IANTD believes diving is a risk taking activity and that divers must be aware of those risks.
- The more advanced the diving styles, the more polished the skill level of divers must be to provide safety. In addition, standard minimum skills and theory assure each Instructor that divers coming into our Programs from another IANTD Instructor are ready to advance their diving education.
- IANTD requires a standard student text and/or other equivalent text(s) (if submitted and approved in writing by the BOD) to ensure that the theoretical knowledge exists to make the given level of diving safe. In cave diving, the NSS/CDS and NACD texts are considered equivalent and, in fact, are recommended as supplements to the IANTD *Cave Diving Manual* and *Student Workbook*.
- Upon Program completion, IANTD requires students pass a written exam as a means to measure their knowledge level. If a student cannot take a written exam, tests may be administered orally or by any means that conveys knowledge of the information.
- IANTD has leadership / supervisory ratings to allow for "Instructor Assistants" in preparation of advancement towards instructorship.

# IAND, Inc./IANTD believes that being confident, competent and knowledgeable, through responsible training, enables one to survive the seemingly un-survivable situation.

# IAND, INC. / IANTD STANDARDS DEVELOPMENT PROCEDURES

The IAND, Inc./IANTD Standards and Procedures are promulgated for the guidance of IANTD Professionals i.e. Divemasters, Supervisors, Assistant Instructors, Instructors, Teaching Assistants and Instructor Trainers. These Standards will be reviewed annually and when necessary updated based on recommendations by the Board of Advisors (BOA), Licensee Directors and the Board of Directors (BOD).

Instructors wishing to input recommendations on Standards may do so by addressing a letter to the chairperson of the BOA, which will be forwarded to all BOA members for their consideration. The suggestions are further reviewed by the Licensees and then forwarded to the BOD for final approval and implementation. <u>The BOD reserve the right of final authority on Standards and Procedures, with all revisions approved by the BOD.</u>

The requirements listed below must be adhered to in order to be a sanctioned IAND, INC/IANTD course. Failure to follow these requirements will be considered a breach of Standards thus denying sanction as an IANTD activity:

- All prerequisites must be met and documented by logbook, or verification by witnesses or notarized statement or other proof of diving experience. Prior to all dives a "briefing" must be conducted. Following all dives, a "debriefing" must be conducted.
- On all courses, including combined Programs, a waiver must be signed by the student for each course taught.
- A student must sign a dive physical anytime there is more than 3 months between training programs with the same instructor, or after a major illness or injury has occurred. A new physical must be signed every time a student enrolls in a course with a different instructor.
- IAND, Inc. / IANTD approved texts must be issued, used, and retained in each Program.
- All lectures must be completed and the written exam must be passed with a minimum score of 80%.
- Confined water sessions are to be completed prior to open-water dives being performed (or overhead environment dives, as applicable). The confined water sessions will include an introduction, demonstration and student performance of watermanship, skills and techniques to be developed during the course. When teaching a combination of courses, all the skills may be practiced in a single confined water session.
- All open-water skill training sessions and dives must be completed. Instructors must complete the watermanship evaluation forms in the Standards as applicable. To complete the course within the minimum specified dives, students must have an average of 8 points (out of 10). With 2 or more additional dives, the student may graduate from the course with an overall average score of 6 points.
- Instructors must sign student divers' logbooks after completion of each dive.
- Depth increases in training programs shall not progress at depths greater than 33 fsw (10 msw) deeper than the previous depth in the course or the students deepest previous depth experience; except in the Trimix Program, where depths may be increased by 40 fsw (12 msw).
- A continuous guideline that allows for a safe exit at the entrance will be in place at all times during training in an overhead environment.
- The students must use all equipment minimums specified for a particular program until the completion of the course.
- All Program limits must be complied with.
- All diver performance requirements must be met prior to certification, as reflected on the student watermanship evaluation form.
- All IANTD Instructors and Divemasters involved in Diver Training Programs and Dive Leadership Programs/Qualifications are considered as representatives of IANTD, regardless of Agency Affiliation or Program.
- All Instructors and Divemasters must have IANTD insurance or provide proof of insurance by another accepted insurance program. Instructors
  teaching a class shall treat all persons diving under the instructor's and Dive Master's/Dive Supervisor's direct supervision or escort as students.
  Specified student to instructor ratios will be maintained so as to include students and other divers who are under the instructors' supervision.
- On any occasion a student requires assistance, the instructor and any dive master or dive supervisor will make every reasonable effort to assist or rescue the student. The instructor will be expected to continue an assist or rescue attempt until it is either successful or it becomes apparent that to continue will result in unreasonably endangering the rescuers life or endanger other students or members of the dive team.
- When diving offshore, during training the lift bag is to be used as a backup decompression or ascent platform and not as the primary platform, except in circumstances defined by the environment being dived in such as strong currents, boat traffic, or other conditions that would make the use of a float ball and ascent line impractical or dangerous. On drift dives, it is recommended that an ascent line attached to a float be used to provide stability for students during ascent. Only in situations where the circumstances of the environment or the dive make a fixed or drift ascent line buoyed to the surface or attached to a boat a less safe option will lift bag deployments be used as the primary ascent platform for dives deeper than 100 fsw (30 msw).

# Instructors, Instructor Trainers, Assistant Instructors Supervisors and Divemasters not complying with the above requirements are considered in violation of IANTD Standards and Procedures. Qualification will not be awarded to students not trained to these IANTD Standards and Procedures.

Licensees, Facilities, Instructor Trainers and Instructors who cannot comply with or would like to request a waiver for a particular section of the IANTD Standards and Procedures, or have a specialized need to present material otherwise, must obtain a written waiver from the Training Director of IAND, Inc. / IANTD World Headquarters prior to teaching the program and submit a copy of the waiver to IANTD World HQ or the local Licensee Office for record keeping purposes.

# LIABILITY RELEASE (REQUIRED FOR ALL IANTD PROGRAMS)



# IANTD / IAND, Inc. TRAINING PROGRAMS COMPLETE LIABILITY RELEASE AND CONTRACT NOT TO SUE

Name	Date

Course Title \_\_\_\_\_ Instructor Name \_\_\_\_\_

I UNDERSTAND THE PURPOSE OF SIGNING THIS DOCUMENT IS TO EXEMPT AND RELEASE IANTD/IAND, INC., AS WELL AS MY INSTRUCTORS, AFFILIATED PERSONNEL, THE FACILITY THROUGH WHICH I RECEIVE MY INSTRUCTION, ALL VESSELS (WHETHER OWNED, OPERATED, LEASED OR CHARTERED) AND ALL OTHER INVOLVED PERSONNEL INCLUDING BUT NOT LIMITED TO THEIR OWNERS, EMPLOYEES, CREW, VOLUNTEERS, DESIGNEES, AGENTS, SPONSORS, AND ADVERTISERS (HEREINAFTER THE "RELEASED PARTIES") AND TO HOLD THESE ENTITIES AND INDIVIDUALS HARMLESS FROM ANY AND ALL LIABILITY ARISING AS A RESULT OF ANY ACTS OR OMISSIONS ON THEIR PART, INCLUDING, BUT NOT LIMITED TO, ACTIVE OR PASSIVE NEGLIGENCE OR NEGLIGENCE OF ANY TYPE.

I understand that scuba diving, especially technical diving is a hazardous activity with inherent risks and dangers associated therewith including, but not limited to, training accidents, risks associated with equipment failure, perils of the sea, as well as acts of fellow divers which could result in my serious injury or death. BY WAY OF MY SIGNATURE, I EXPRESSLY ASSUME ALL RISKS OF SCUBA DIVING and all associated risks (whether directly related to diving or not), whether these risks are specifically set forth or not. IT IS MY INTENTION TO RELEASE THE RELEASED PARTIES FOR ANYTHING THAT MAY HAPPEN TO ME WHICH RESULTS IN PERSONAL INJURY OR DEATH.

By my signature on this release, I hereby affirm that I have been advised and informed of the inherent hazards of scuba diving activities, including technical diving. I understand that breathing compressed gas underwater such as; compressed air, oxygen, enriched air (Nitrox), oxygen and/or helium (Trimix and/or Heliox) and/or neon in either Open Circuit, Semi-Closed Circuit or Closed Circuit rebreathers involves inherent risks including, but not limited to, decompression injuries, embolism, oxygen toxicity, inert gas narcosis, marine life injuries and other barotrauma/hyperbaric injuries which can occur that require treatment in a recompression chamber or hospital. I understand that scuba diving trips, which are necessary for training and certification, may be conducted at a site that is remote, either by time or distance or both from a recompression chamber or from any medical facility. Nonetheless, I expressly wish to proceed with this diving activity and assume all risks. I hereby waive any obligation on the part of the released parties to provide first aid, rescue, recovery resuscitation or medical assistance.

I understand that scuba diving activities are physically strenuous and that I will be exerting myself during this scuba diving course and related activities. If I am injured or killed as a result of cardiac events, panic, hyperventilation, oxygen toxicity, inert gas narcosis, drowning, medical events, or for any other reason, I expressly assume all risks and will not hold the released parties responsible for same.

Page 1 of 2

# IANTD / IAND, Inc. TRAINING PROGRAMS COMPLETE LIABILITY RELEASE AND CONTRACT NOT TO SUE

I understand that I am signing this release, without modification or any other promises, in consideration of being permitted to enroll in this course and participate in the diving activities.

I will be responsible for inspecting all of my dive equipment prior to each dive to ensure that I have all the necessary equipment for the dive, and that all the equipment is in proper working order with proper and sufficient gas supplies for the dive. I will not hold anyone responsible for my failure to inspect the equipment I use, analyze the gases I use and plan my dive.

IT IS MY EXPRESS INTENTION TO GIVE UP MY RIGHT TO SUE ALL INDIVIDUALS OR ENTITIES OR VESSELS referred to herein ("the released parties") whether specifically named or not, from all liability arising as a consequence of any act or omission including, but not limited to, active or passive negligence of any type. I fully agree to indemnify and hold the released parties harmless from any and all liability for personal injury of any type, including wrongful death. I make this agreement on behalf of myself, my heirs and assigns. I expressly and contractually assume all risks in connection with scuba diving activities whether directly related to diving or not. I understand and agree that it is my responsibility to make my family aware of the risks of injury or death from diving activities, that I accept these risks and choose to participate anyway. I hereby represent that I, or my estate, shall be liable in full for any claim brought on my behalf by my family, estate or heirs, arising from my injury or death while participating in diving activities.

BY WAY OF MY VOLUNTARY SIGNATURE, I AGREE THAT I HAVE FULLY READ AND UNDERSTAND THIS DOCUMENT IN ITS ENTIRETY. I UNDERSTAND THAT THIS IS A LEGALLY BINDING CONTRACT NOT TO SUE.

Participant's Name (Print)			Participant's Signature			
Address:						_
City:				State _		-
Country			_ Postal Code			
Telephone:		Email:_				

If the participant is under the age of 18, then the parent or guardian must sign this agreement and agree to be legally bound by it and furthermore be legally responsible for the minor participant, including being responsible for all damage, injury or death which may occur as a result of the minor's participation in diving activities. The parent or guardian hereby agrees to be fully responsibility to the released parties for any damage, injury or death caused by the minor, including actions brought by the minor, for any damages whatsoever.

Parent or Guardian's Name (print)

Parent or Guardian's Signature

# INTERNATIONAL QUALIFICATIONS (CROSS-BORDER POLICIES)

### A. Divers

1. Divers may travel to any place internationally for training. All diver levels are recognized internationally. It is recommended that divers trained in a diving environment differing from where they may be diving or intending to dive complete an environmental checkout in the conditions where diving will take place.

# B. Instructors

- 1. Instructors may be qualified in any Region.
- 2. An instructor who travels to a different Region to be qualified, upon qualification must become an instructor member in the Region wherein the instructor resides.
  - a. The instructor card and certificate will be sent to the Licensee of the Region where the new instructor resides, who will forward the documentation to the instructor once the instructor becomes a member in that Region.
  - b. Once membership dues are paid, the instructor will be granted full instructor privilege at the level qualified for.
  - c. Instructors moving from one Region to another Region that are under different Licensees, for a period greater than 90 days, must obtain membership in the new Region in order to be on active teaching status in the Region.
  - d. Instructors completing training or crossover courses overseas will be required to demonstrate they are familiar with the environment they will be teaching in. If the instructor qualification was in a similar environment to the one in the native country no evaluation will be made. If the IEC was conducted in an environment differing from the native country an evaluation can be done by reviewing the experience of the instructor in environments similar to the one in the region.
  - e. If the new instructor is not familiar with diving or teaching in the type of environment in the licensed territory they may at the discretion of the licensee be required to complete an environmental acquaintance prior to teaching within their chosen country of operation. This may be as simple as a dive log review or a more comprehensive evaluation such an evaluation dive and environmental Presentations or if warranted co-teaching a portion of a course, or an entire course. The exact option will depend upon the background of the new instructor. This process, if mandated by the Licensee, will be under the direction of an IT assigned by the Licensee themselves.
  - f. Instructors teaching local residents a qualification course that travel to a different Region for part of the course must notify the Licensee in the different Region that they will be doing training in that Region. Permission is automatic so long as the instructor is not teaching residents of the Region being visited.
- 3. Instructors who wish to teach or who have been invited to teach Programs in a Region they do not reside in must:
  - a. Request permission of the Licensee of the Region where the course will take place. Failure to do so will result in the qualifications not being processed and internationally sanctioned disciplinary action against the instructor, ranging from probation to suspension dependent on the circumstances.
  - b. The Licensee may refuse permission if the activity presents a conflict of interest with other similarly qualified instructors in the Region or if there is no justification for the Programs to be taught.
  - c. As general rule, permission will be granted if justified.
  - d. Qualifications must be processed in the Region where the training is to be performed.

# C. Instructor Trainers

- 1. Instructor Trainers are only qualified in a given licensed Region on an as-needed basis.
- 2. Instructor Trainers moving from one licensed Region to another must notify the new territory's Licensee of the relocation. The Licensee must acquaint the IT with local laws and policies before activation of the IT status in the new Region. If there is no need for an IT in the new Region, the Licensee may grant IT status with the provision that the IT conduct Programs only in a different part of the Region on an as-needed basis.
- 3. In the event that there is no need for additional ITs in any part of the licensed Region, the IT may be placed on inactive (reserve) status until such a need exists.
- 4. Instructors who have met the prerequisites to become an IT and who have a need or desire to be trained as an IT outside the licensed Region must have a letter of authorization from the Licensee to do so.
- 5. Instructor trainers may not conduct IECs in licensed Regions other than the one they are a member in, without an invitation or letter of authorization from the Licensee of a specific Region.

# IANTD STUDENT WATERMANSHIP EVALUATION FORM FOR INDIVIDUAL DIVES This form is REQUIRED for and is applicable to ALL Diver Qualification Programs

Course Title:		S	Started:	Ended:
Instructor:	SI	tudent:	M	et Prerequisites?

To complete the course within the minimum specified dives, students must have an average of 80 points (out of 100)). With 2 or more additional dives, the student may graduate from the course with an overall average score of 60 points.

Dive Number	1	2	3	4	5	6	7	8
1. Buoyancy Control								
At Depth								
During ascent								
At safety or required decompression stops								
Average								
2. Propulsion Skills								
Overall finning technique and efficiency								
Body posture for low drag and silt avoidance								
Pulling technique where applicable								
Average								
3. Equipment Familiarity								
Comfort with equipment and configuration								
Knowledgeable in location & operation of all support equipment								
Ability to efficiently switch gases if applicable and control PO2 on CCR								
Ability to manage equipment in water								
Average								
4. Awareness								
Aware of buddy or Instructor location								
Monitoring of gauges or dive instruments and PO <sub>2</sub> on CCR								
Physical presence awareness (orientation on dive)								
Responsive to signals								
Capable of self rescue (includes performance of emergency responses)								
Capable of buddy rescue (includes being accessible to buddy)								
Awareness of & responsive to changes in equipment status during drills								
Ability to focus on dive objectives								
Overall alertness								
Average								

IANTD STUDENT WATERMANSHIP EVALUATION FORM FOR COURSE COMPLETION - Applicable to all Diver Qualification Programs -

Course Title	Course Starting / Ending Dates	s:// <>//
Verification: Met course prerequisites	? Instructor	Student
Upon completion of the course fill out the	following	
<ol> <li>Overall evaluation (Satisfactory   Un ASelf-sufficiency</li> <li>BSafety and alertness</li> <li>CCapable of diving or using thi</li> <li>DSafe to dive unsupervised</li> <li>EBuddy can be comfortable ar</li> <li>FPhysical fitness for the type of an average pace of 50 feet (1 GMental fitness and overall con needed for this type of diving</li> </ol>	is type of equipment safely nd safe diving with this person of diving (the student must demonst 15 meters) per minute as the minim mprehension of risk management a	strate ability to swim 20 minutes in full gear at num fitness requirement) and understanding of equipment and skills
2. In my instructor(s) evaluation of equipment management abilities to		comfort, physical fitness, mental fitness and le: for qualification at this level of training.
3. <b>Therefore I</b> , — Diver qualification be issued at t — Student complete the following p (See the objectives as specified by	the applicable level. provisions before being awarded a	
To complete the course within the mir	nimum specified dives, students	s must have an average of 8 points (out of

To complete the course within the minimum specified dives, students must have an average of 8 points (out of 10). With 2 or more additional dives, the student may graduate from the course with an overall average score of 6 points on the watermanship evaluation forms.

Comments:

Instructor: Signature and Date

Student: Signature and Date

NOTE: This form is to remain in the instructor's possession in the student folder for a minimum of 5 years. Upon request for QA reasons or legal needs, the instructor will provide IANTD HQ or the local IANTD Licensee a copy of these forms for a specified student(s).

# IAND, INC. / IANTD INSTRUCTOR INSURANCE

IAND, Inc. / IANTD made history in 1993 when it became the first Technical Diving Qualification Agency to acquire Instructor Insurance. This insurance allows an Instructor to train divers in the use of air to depths greater than 130 fsw (39 msw), mixed gas to 400 fsw (120 msw) and decompression techniques. Importantly, it also covers Cave and Wreck Penetration training. We achieved this based on our substantial number of accident-free, high quality "Technical Instructors," thus providing a premium that justified our underwriter's risk acceptance. In 1995, IAND, Inc. / IANTD became the **first** diver training agency to acquire Instructor and Facility insurance for training divers from entry level through all levels of recreational diving, including both sport and technical diving.

# THE IAND, INC. / IANTD INSTRUCTOR INSURANCE ADVANTAGE

The IANTD policy provides coverage automatically for all Instructors, facilities and boats, or other risk sources (pools, additional qualification agencies, classroom areas, fill stations, etc.) while the Program is being conducted.

This insurance protection is in full force for the duration of every Program.

IANTD insurance provides coverage for training agencies whose Standards have been approved by IANTD, who have been in business for a minimum of two incident free years, and who meet or exceed the minimum Standards advocated in joint agreements by other agencies.

IAND, Inc./IANTD Standards and Training Programs have been developed that allow worldwide recognition of skills and knowledge at each qualification level achieved. This enables a diver to become IANTD qualified in any location and then travel to another location and continue to train in IANTD Sanctioned Programs. The new Instructor can feel assured that this diver has met the standard knowledge and skill levels internationally agreed upon. Throughout the diver's entire continuing education process, your IAND, Inc. / IANTD Instructor Insurance policy is still working to protect you.

Instructors who are carrying insurance through another acceptable agency (inquire to HQ) must submit proof of current annual policy renewal to IANTD. The policy must provide coverage for the IANTD Programs being taught and it must specifically list "IAND, Inc./IANTD" as an additional insured.

Some other training agencies require Instructor Authorization / Approval to cover EANx and/or Technical Diving Programs. It is the Instructor's responsibility to acquire proper written <u>authorization and submit a copy of said</u> <u>approval to IAND, Inc./IANTD World Headquarters.</u>

Current IANTD Standards comply with all EU requirements for diver training.

# DEFINITIONS AND TERMS USED BY IAND, INC. / IANTD

- Appropriate Diver Support First aid equipment including but not limited to a first aid kit suitable for the planned diving activities, an emergency oxygen unit with a capacity of delivering pure oxygen for at least 20 minutes and a communication system suitable for alerting emergency services.
- Bottom Mix The gas mixture(s) in the cylinder(s) intended to be used during performance of the bottom time phase of the dive.
- **Briefing** Short pre dive discussion between Instructor and students including but not limited to procedures to be followed (team assignments, entry, descent, ascent, surfacing, exit, time/depth limits, problem/emergency situations), site/environmental considerations, communication, pre dive equipment preparation, drills to be practiced (in case of training), and post dive procedures.
- **Cave Dive** Dives into a cavern/cave beyond where a light from an exit point can be seen.
- **Commercial Diving** A form of diving, excluding instruction, where the diver works for hire and his/her employment depends on a willingness to dive.
- **Confined Water** Any body of water with limited current, which meets the appropriate IAND, Inc./IANTD visibility requirements, that is calm and has shallow water access such as swimming pools, lakes, springs, sinks, quarries, bays, and beaches that are protected from open seas and rough water. Training sessions must be limited in confined water experiences to no deeper than 20 fsw (6 msw) for sport diver level courses and 40 fsw (12 msw) for technical diver level courses.
- **Confined Water Session** An instructional session that takes place in confined water. The confined water sessions will include an introduction, demonstration and student performance of watermanship, skills and techniques to be developed during the course. When teaching courses that combine two or more levels of training the confined water skills for the courses may be combined into one session.
- **Debriefing** Short post dive discussion between instructor and students including but not limited to comments on the dive and further directions.Remember we have a mandatory water skills for (a intense debriefing) the instructor is and has been REQUIRED to fill out each dive so it is already there in much more detail than this and if we discover instructors not doing this they will be brought on qa charges
- **Decompression Mix** The gas mixture(s) in the cylinder(s) used during the ascent (decompression) phase of the dive.
- **Direct Supervision** Supervision by the instructor of the class or group of students from a distance allowing a direct intervention on behalf of the student.
- **Diver's Physical** An approved diving physical statement. This is required prior to involvement in the first water session of a given course or combination of courses.
- **Emergency plan** A written piece of information including but not limited to procedures for casualty recovery, resuscitation and evacuation, use of emergency oxygen supply, information about the nearest medical resources and information about the nearest hyperbaric recompression chamber.
- END Equivalent Narcotic Depth
- Escorting Supervision of an individual student or group of students by someone other than the instructor. (Qualified teaching assistants may escort students during surface excursions and exits, ascents and descents and may attend to remaining students while the instructor conducts a skill with other students or if no skills are being performed by the student)
- Indirect Supervision Supervision by a qualified teaching assistant during segments of a dive where skills are not practiced. An Instructor must be present at the site and in control of the activities. The Instructor must approve all diving activities, approve the dive plan, perform dive preparations and equipment configuration, observe entries, exits and debriefings, and be prepared to quickly enter the water if necessary. The Instructor must be able to respond to classroom activities and be on-site. The Instructor must be able to take control of any program at any time if necessary.

Revision Date 12/1/2006

- **Instructor** An individual who is qualified by IANTD to teach complete or a part of specific diver training courses, upon completion of a formal instructor development or crossover and evaluation course, such as an Assistant Instructor (limits apply to this level), or Instructor.
- **Instructor Trainer** An individual who is qualified by IANTD to teach specific instructor training courses, upon completion of a formal instructor trainer development and evaluation course.
- In Water Training A combination of confined water and open water dives.
- **Open Water (OW)** Any body of water, excluding swimming pools and training tanks, that is 15 fsw (4.5 msw) or deeper for sport diving courses, or at least 40 fsw (12 msw) deep for technical diving courses.
- **Overhead Environment** Any dive site that has a physical ceiling, such as wrecks and caverns, from which a quick and direct escape to the surface cannot be safely made.
- **Overseeing** The overall control, intermittent supervision, evaluation, and direction of instruction, student skill performance and diving activities by an instructor of a class or group of students. The instructor must be present at the training site and on the training dives, and be prepared to render appropriate in-water assistance in aid of a student.
- **Pre Dive Check** A check including but not limited to gas availability and suitability for the dive and equipment operating condition. It is sometimes conducted by the dive buddy in the water or just before entering.
- **Recreational Diving** All forms of diving intended for recreational purposes or instruction of recreational divers, in which the diver has the option to dive. This includes both the most popular form of recreational diving, sport diving; as well as technical diving, which is an advanced form of recreational diving.
- Software Generated Tables Software Generated Tables Decompression profiles produced by various dive planning soft ware, These may be used in conjunction with the required IANTD Dive Tables or a Dive Computer. In training the student must always have IANTD dive tables in their possession when performing dives as primary or back up schedules.
- **Sport Diving** The most common form of recreational diving. Sport diving is performed using either air or Nitrox mixtures up to 40% oxygen on dives no deeper than 130 fsw (39 msw). Sport divers at the level of Advanced EANx or Advanced Recreational Trimix, which is defied as an entry level technical course may not engage in dives requiring a total of more than 15 minutes of decompression time, or dives with a higher decompression PO<sub>2</sub> of 1.5
- Supervision Having direct control over an individual student or group of students, with an ability to directly intervene if needed.
- Teaching Assistant An individual who is qualified by IAND, Inc./IANTD to supervise or assist specific diver training courses such as a dive master, dive supervisor or instructor from a lesser level but who is qualified as a diver at the level of the training program. Teaching assistants may be utilized in all courses to provide indirect supervision or even direct supervision when under the direction of an instructor in the water who meets the definition of direct supervision. Teaching assistants may also escort students.
- Technical Diving An advanced form of recreational diving utilizing skills, techniques, equipment and knowledge beyond the requirements of sport diving. Technical diving includes, but is not limited to, dives deeper than 130 fsw (39 msw), dives into overhead environments beyond a visible exit point, dives using mixed gas (in addition to sport diving EANx mixtures), and dives requiring staged decompression.
- Training Dives An excursion by a student diver into open-water or overhead environments while fully equipped for the planned activity. Each dive must include at least one entry and one exit and underwater activity breathing from SCUBA for a minimum of 20 minutes to a depth of at least 20 fsw (6 msw) for sport diving courses, or 40 fsw (12 msw) for technical level courses.
- **Travel Mix** The gas mixture(s) in the cylinders used to provide an advantageous or safer breathing mixture while descending or traveling to or in some cases from a deeper phase of the dive.
- Virtual Overhead Environment Any dive from which a direct ascent to the surface would violate required decompression obligations.

Waiver – An IAND Inc./IANTD liability waiver. A waiver is needed for each specific course or, if a series of courses are taught concurrently, one waiver may list each Program in the training curriculum. If there is an interruption in the training program of more than 90 days, a new waiver shall be completed.

Wreck Penetration – Excursions inside of a wreck beyond where light from an exit point can be seen.

# IAND, INC. / IANTD SPORT DIVER PROGRAMS

NOTE: Unless indicated as specifically for Sport Diver Programs, the following general statements apply to all IAND, Inc./IANTD Diver Qualification Programs.

## A. Purpose

1. These Programs are designed to provide quality instruction of IANTD Sport Diving qualification levels.

# **B.** Prerequisites

- 1. In order to credit equivalent experience, the diver must provide proof of experience and knowledge or complete all water skills requirements from the previous level of qualification and complete the IANTD standard written exam with a minimum score of 80% for that level of qualification, prior to becoming qualified at the new and more advanced level.
- 2. For every Program the student must fill out a medical history form and, if any contraindications exist, must have a complete physical and written authorization performed by a medical doctor.

# C. Texts / Media

1. All IANTD courses require Student Kits to certify divers. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD diver program name" followed by the words Student Kit.

# D. Program Content

- 1. Must include all content material as presented in the approved workbook or text for the Program and Student Kit where noted.
- 2. Complete a written exam with a minimum score of 80%.
- Skills listed in the Water Skills Development section of the Program enrolled in, must be completed prior to qualification. These skills may be performed in a combination of OW and confined water, for basic skills and stress management development. These skills reflect the minimums that a student must perform. Instructors MUST complete watermanship evaluations as specified on pages 12 & 13.
- 4. For training purposes, the minimum time for a dive is considered to be 20 minutes at a minimum depth of 20 fsw (6 msw) unless otherwise stated.
- 5. No more than 3 open water dives shall be conducted on a given day.
- 6. A continuous guideline that allows for a safe exit at the entrance will be in place at all times during training in any overhead environment.

# E. Equipment Requirements

- 1. A sufficient quantity of gas will be carried by the diver to allow completion of the dive time requirements incorporating the correct gas management rule. For no-stop diving,  $\frac{1}{2}$  + 200 psig (14 bar); and for dives with stops or in overhead environments, the Rule of Thirds.
- 2. A primary gas supply systems featuring an alternate second stage or alternate breathing source, or redundant gas system as specified in the Equipment Requirements for each Program.
- 3. A quick release weight ballast system (if appropriate).
- 4. Submersible pressure gauge.
- 5. Buoyancy control device (BCD), including a cylinder support system.
- 6. Mask, fins and snorkel (if appropriate).
- 7. Means of monitoring depth and bottom time. This can be done through the use of a depth gauge and bottom timer or a dive computer.
- 8. Submersible dive table must be used as backup to a dive computer or for control of the dive
- 9. Appropriate exposure suit for the environment in which the diver is being trained.
- 10. Slate and pencil. (not required in the Supervised Diver or OW Diver course).
- 11. Cutting tool or device.
- 12. Compass.
- 13. Surface alert device (whistle, diver alert, etc.) (not required in the Supervised Diver or OW Diver course).
- 14. Equipment is to be configured in a neat low-drag manner.

#### For Deep Diver Program and beyond, the following are required:

- 15. A lift bag of at least 50-lb. (22.5-kg) lift capacity and a line reel for deployment.
- 16. Either a dual-outlet valve or a separate 18 cubic feet (510 free liters) pony cylinder or greater capacity must be used. If a Rebreather is used, it must be equipped with adequate bailout.

17. Bolt snap hooks / scissors clips used for attaching equipment to the diver are recommended.

#### For Advanced EANx, Advanced Recreational Trimix and Divemaster:

18. Either a dual outlet valve and a separate pony cylinder, a standard valve and two pony cylinders or double cylinders with dual valve out let or side mount configuration with a decompression stage cylinder must be used. If a Rebreather is used, it must be equipped with adequate bailout.

#### For Cavern or Wreck:

19. A dual outlet valve is recommended. If a Rebreather is used, it must be equipped with adequate bailout.

#### For Introductory Cave:

20. Dual outlet valve required. If a Rebreather is used, it must be equipped with adequate bailout.

#### For all Rebreather Programs, the following are required:

- 21. A Rebreather approved by IANTD.
- 22. An adequate bailout gas supply must be equipped.
- 23. Tables to back up on-board dive computer or tables to use as dive control for units that do not provide on-board dive computers.

NOTE: Tanks and regulators used with gases containing oxygen concentrations greater than 40% must be O<sub>2</sub> service rated (Example: partial pressure blending requires oxygen service rated tanks).

### F. Program Limits

- 1. IANTD Programs are unique in that they require the student to complete a specified amount of bottom time prior to becoming qualified at a given level. Specific bottom time requirements are given in each individual Program.
- Recognizing that there may be unusual circumstances or that some individuals excel beyond the level of others, Instructors may
  waive up to 10 percent of the stated bottom time in any IANTD Program to students with exceptional skill mastery or extensive
  diving experience.
- 3. The maximum classroom Student to Instructor ratio is 20 to 1, and maximum in-water ratios are specified in each program.
- 4. No dives will be planned or intentionally executed to depths greater than 130 fsw (39 msw) during any Sport Diver Program.
- 5. In all IANTD Sport diving Programs, the maximum Student to Instructor ratios permitted are based on entering the water with visibility of 25 feet (7.6 meters) or more. If the visibility upon entering the water is less than 25 feet (7.6 meters), the following modifications of Student to Instructor ratios apply.
  - a. If the visibility is between 19 feet (6 meters) and 25 feet (7.6 meters) the maximum Student to Instructor ratio is 5 to 1.
  - b. If the visibility is between 12 feet (3.6 meters) and 19 feet (6 meters) the maximum Student to Instructor ratio is 4 to 1.
  - c. If the visibility is between 8 feet (2.4 meters) and 12 feet (3.6 meters) the maximum Student to Instructor ratio is 3 to 1.
  - d. If the visibility is between 5 feet (1.5 meters) and 8 feet (2.4 meters) the maximum Student to Instructor ratio is 2 to 1.
  - e. If the visibility is less than 5 feet (1.5 meters) then the conduct of Sport diving is not recommended. If conducted must be at a Student to Instructor ratio is 2 to 1.
- 6. On all dives, the IANTD Dive Tables must be used as either the primary decompression management or as a backup to a dive computer or custom software program or other tables approved by the IANTD BOD
- 7. IANTD feels that Advanced Nitrox and Advanced Recreational Trimix are sport diving courses that we consider entry-level courses for technical diving.

#### G. Qualification Requirements

- 1. Upon completion of all listed classroom sessions, watermanship skills and dives to the Instructor's satisfaction, an appropriate IANTD Diver qualification card will be issued.
- 2. Students with unsafe attitudes, or who demonstrate bad dive habits, must not be qualified. Training is purchased upon enrollment. Qualification is earned through the student's performance and knowledge demonstrated throughout the Program.
- 3. The Program enrolled for must be completed within six months from the starting date, unless otherwise specified in the Program Standard.
- 4. It is recommended that all training dives be logged in the IANTD Recreational or Technical Diving logbook.

#### H. Qualification Renewal

- 1. The IANTD Diver Qualification Card does not have an expiration date, unless otherwise indicated.
- 2. For all professionals, such as Divemasters, Supervisors, Assistant Instructor, Instructors and Instructor Trainers, proof of insurance or financial responsibility and IANTD membership is required annually.

# Resort Diver

# A. Purpose

- 1. This Program is designed to provide basic training to those who wish to enter into SCUBA diving adventures within limited time.
- 2. This Program qualifies a diver to dive to a maximum depth of 40 fsw (12 msw).
- 3. Upon completion of this program, the diver may dive only under the direct supervision of a Divemaster, Assistant Instructor, or Instructor, at a maximum ratio of 4 Supervised Divers per Divemaster, Assistant Instructor, or Instructor, provided that the Divemaster, Assistant Instructor, or Instructor, o
- 4. Supervised divers may only participate in diving activities where appropriate diver support is always available at the surface, and where in-water decompression stops are not required and under conditions that are equal or better than the conditions where they were trained.

# B. Prerequisites

1. Must be a minimum of 15 years of age with a documented parent or legal guardian authorization, or a minimum of 12 years of age for Junior qualification, or a minimum of 18 years of age without parent or legal guardian approval.

# C. Program Content

- 1. All lecture topics in the Supervised Diver slides must be covered and all the water skills must be practiced until the student is proficient in each skill.
- 2. Demonstrate the ability to configure equipment neatly.
- 3. All skills in the Supervised Diver course are to be taught and practiced in confined water before moving into the Open Water dives.
- 4. The Program must include a minimum of 40 minutes of OW bottom time completed within at least 2 SCUBA dives. The bottom time on each dive should not be less than 15 minutes.
- 5. Complete and pass an oral or written exam.
- 6. Complete the following land skills:
  - a. Assemble and disassemble the diving equipment.
  - b. Conduct pre dive checks.
  - c. Provide post dive care on the diving equipment.

# D. Equipment Requirements

1. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

# E. Program Limits

- 1. There may be no more than 6 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster or Assistant Instructor, up to a maximum of 10 students with 2 IANTD Divemasters or Assistant Instructors, per class session. The ratio may be decreased according to instructor's discretion taking into consideration environmental conditions or other relevant factors, so as to allow adequate class control and supervision, or local legislation. Physical contact with every student shall be always possible.
- 2. On any of the program dives the maximum depth should not exceed 40 fsw (12 msw).
- 3. All dives must be conducted within no decompression time limits, and according to IANTD approved dive tables.
- 4. Appropriate safety stops must be performed.
- 5. On all dives, ascend at a rate of 30 feet (9 meters) per minute or slower.
- 6. All open water dives shall be conducted in environments that will allow at all times a direct vertical access to the surface, with an Instructor directly supervising, teaching and evaluating the students.

# F. Waterskills Development

- 1. Swim 165 feet (50 meters) without the use of mask, fins, snorkel or other swimming aids. This skill to be conducted prior to any OW dives.
- 2. Remain afloat with a minimum of effort for 5 minutes without the use of mask, fins, snorkel or other swimming aids. This skill to be conducted prior to any OW dives.
- 3. Surface entries and exit.
- 4. Mask clearing and use.

- 5. Snorkel clearing and use.
- 6. Demonstrate and perform at least two finning techniques.
- 7. Practice hand signal communication.
- 8. With mask, fins and snorkel swim a distance of 333 feet (100 meters) on the surface.
- 9. Swim a distance of 10 feet (3 meters) underwater, ascend and clear snorkel.
- 10. Swim using mask, snorkel and fins for a distance of 33 feet (10 meters) underwater without surfacing.
- 11. Swim on surface while wearing full SCUBA gear and switch from the regulator to snorkel and back at least 3 times for a distance of 100 feet (30 meters).
- 12. Demonstrate proper descend and ascend procedures.
- 13. Use SCUBA at rest, and then perform mask clearing, mask removal and replacement, regulator clearing and regulator recovery.
- 14. Swim underwater using SCUBA without mask for 30 feet (9 meters).
- 15. Practice buoyancy control and body posture on the surface and underwater, at rest and while swimming.
- 16. Demonstrate basic instrument monitoring.
- 17. Swim on back (face up) on the surface while wearing full SCUBA gear for a distance of 100 feet (30 meters).
- 18. Simulate a vertical ESA while free-diving from the deep end of a pool.
- 19. Do a lateral Emergency Swimming Ascent (ESA).
- 20. Perform alternate gas source (octopus, secondary regulator, alternate air, etc.) gas sharing drill both as receiver and donor. The gas-recipient diver must swim a distance of at least 30 feet (9 meters) (without breathing, and exhaling slowly) to the gas-donor diver and commence gas sharing on the alternate second stage. Remain at rest for three breaths and then swim, sharing gas, at a normal swim pace.
- 21. On the surface practice the quick release of the weight ballast system.

# EAN<sub>x</sub> Resort Diver

# A. Purpose

1. This Program is designed to provide Sport Divers with an introductory experience to the benefits of EANx diving. The Program does *not* qualify divers as EANx divers and does *not* count towards EANx Diver qualification.

# **B.** Prerequisites

- 1. Must be qualified as an Open Water Diver.
- 2. Must be a minimum of 12 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.

# C. Program Content

- 1. Lecture covering basic EANx theory.
- 2. All divers must perform at least one dive on an EANx mixture of between 24 and 40% oxygen.

# D. Equipment Requirements

1. Equipment used during this Program must be appropriate for the environment and in good working order.

# E. Program Limits

- 1. There may be no more than 4 students per Instructor.
- 2. No dives may be conducted to depths greater than the student's previous qualification, or a maximum of 130 fsw (39 msw). The first dive on EAN 32 must not exceed the diver's previous depth qualification and be no deeper than 130 fsw (39 msw).
- 3. Appropriate safety decompression stops must be performed.
- 4. The Instructor may elect to use the applicable EANx tables or plan the dives as if air were used, thus capitalizing on the maximum physiological safety factor.

# F. Qualification Requirements

1. The Program does not qualify divers as EANx divers and does not count towards EANx Diver qualification. A wall certificate may be issued.

# G. Qualification Renewal

1. There is no renewal; however participants are encouraged to become subscribers to IANTD's *Nitrox Diver* magazine. In addition, they should be encouraged to take the EANx Diver Program.

# **Rebreather Experience**

#### A. Purpose

1. This Program is designed to introduce the diver to the basic concepts of Rebreathers, and to provide a practical confined water and optional OW exposure for swimming with a Rebreather. It is *not* a Qualification Program.

### **B.** Prerequisites

- 1. Must be a qualified diver.
- 2. Must provide proof of a minimum of 10 logged dives.
- 3. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.

# C. Program Content

- 1. Complete materials from selected text or handouts at Instructor's discretion.
- 2. Demonstrate ability to maintain buoyancy with Rebreather and to perform basic skills with unit.
- 3. Swim unit in confined water, and may do one optional open water dive to a depth no greater than 50 fsw (15 msw).

### **D. Equipment Requirements**

1. Approved Rebreather suitable for the experience exposure.

### E. Program Limits

- 1. There may be no more than 2 students per instructor.
- 2. All dives must be conducted in depths not to exceed a depth of 50 fsw (15 msw).

### F. Qualification Requirements

1. This is not a Qualification Program. A wall certificate may be issued at the Instructors discretion stating the diver has participated in a Rebreather Experience on the specified Rebreather unit.

### G. Qualification Renewal

1. There is no renewal for this Program; however, the participant is encouraged to become a subscriber to IANTD's *Nitrox Diver* magazine. In addition, they should be encouraged to take the EANx Diver Program.

### H. Water Skills Development

- 1. Swim unit and practice buoyancy control.
- 2. Perform basic drills as explained by Instructor.
- 3. Use manual overrides.
- 4. Monitor system.

# Open Water Diver / Open Water Nitrox Diver

# A. Purpose

- 1. This Program is designed to provide comprehensive training to those who wish to become SCUBA divers.
- 2. This Program emphasizes the skills and knowledge needed to develop a safer novice diver and to develop a sense of confidence and responsibility in those joining the adventures of underwater discovery.
- 3. This Program qualifies a diver to dive to a maximum depth of 70 fsw (21 msw) in open water, accompanied by other divers of at least the same level, without supervision of a Divemaster, Assistant Instructor or Instructor. The diver can dive to a maximum depth of 100 fsw (30 msw) if they are guided or supervised dive by a dive master or instructor.
- 4. This program qualifies a diver to participate in diving activities where Appropriate Diver Support is always available at the surface, where in-water decompression stops are not required, and under conditions that are equal or better than the conditions where they were trained. If diving in conditions significantly different from those previously experienced the diver shall require an appropriate orientation.
- 5. Upon completion of the Open Water Nitrox Diver Program, the diver may dive any EANx mixture from Air to EAN 40.
- 6. If accompanied by an Instructor, an OW Diver or OWND may gain progressive experience beyond these parameters and develop competency in managing more challenging diving conditions designed to lead to higher qualifications. Where further instruction is required, this can only be provided by an Instructor.

# B. Prerequisites

1. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 12 years of age for Junior Diver qualification, or a minimum of 18 years of age without guardian approval.

### And, For Open Water Nitrox Diver:

2. IANTD *Nitrox Diver Student Manual and Student Kit* or equivalent text(s) approved in writing by the Board of Directors (written approval will be issued by IAND, Inc./IANTD World Headquarters).

# C. Program Content

- 1. Include all material in the IANTD Open Water Student Kit or IANTD Open Water Nitrox Diver Student Kit.and meet all minimum performance skills.
- 2. At least one general lecture must be included addressing the psychological aspects of SCUBA diving. This must include responsible diver attributes, and risk awareness and management for Sport diving.
- 3. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Open Water Diver OR IANTD Open Water EANx Diver Student Kit. All the watermanship skills must be practiced until the student is proficient in each skill.
- 4. Demonstrate the ability to configure equipment neatly.
- 5. Plan dives and demonstrate ability to act as a responsible diver.
- 6. All skills in the Open Water (or OWND) Diver course are to be taught and practiced in a pool or confined water before moving into the OW dives.
- 7. The Program must include a minimum of 80 minutes of OW bottom time completed within at least 4 SCUBA dives and, even if the time requirements are exceeded, a minimum of 4 SCUBA dives must be made. The bottom time on each dive shall not be less than 15 minutes. For qualification as OWND Diver, two dives must be on EANx.
- 8. A snorkel dive is recommended.
- 9. Complete a written exam with a minimum score of 80%. The OWND must also complete the EANx Diver written exam with a minimum score of 80%.

# D. Equipment Requirements

- 1. IANTD Open Water Diver Student Kit or IANTD Open Water Nitrox Diver Student Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

# E. Program Limits

1. There may be no more than 8 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster or Assistant Instructor, up to a maximum of 12 students with 2 IANTD Divemasters or Assistant Instructors, per class session, or may be decreased according to instructor's discretion taking into consideration environmental conditions or other relevant factors, so as to allow adequate class control and supervision, or local legislation. Physical contact with every student shall be always possible.

- 2. OW dives 1 and 2 must be conducted to depths between 20 fsw (6 msw) and 30 fsw (9 msw). At least one of dives 3 or 4 must be conducted to a depth between 30 fsw (9 msw) and 60 fsw (18 msw). No training dives may exceed 70 fsw (21 msw).
- 3. Appropriate safety decompression stops must be performed.
- 4. No more than 3 OW dives shall be conducted on a given day.
- 5. All dives must be conducted within no decompression time limits, and according to IANTD approved dive tables.
- 6. All open water dives shall be conducted in environments that will allow at all times a direct vertical access to the surface, with an instructor directly supervising, teaching and evaluating the students.
- 7. On all dives, ascend at a rate of 30 feet (9 meters) per minute or slower.

#### F. Water Skills Development

- 1. Swim 600 feet (200 meters) required in Australia only
- 2. Swim 165 feet (50 meters) without the use of mask, fins, snorkel or other swimming aids. This skill to be conducted prior to any OW dives.
- 3. Remain afloat with a minimum of effort for 10 minutes without the use of mask, fins, snorkel or other swimming aids. This skill to be conducted prior to any OW dives.
- 4. Mask clearing and use.
- 5. Snorkel clearing and use.
- 6. Surface entries and exit.
- 7. Demonstrate and perform at least two finning techniques.
- 8. Practice hand signal communication and general buddy system techniques.
- 9. Simulate a tired diver situation. Assist him/her to reach the surface and tow him/her for a distance of 30 feet (9 meters) with both the upper body method and again by the fin push method.
- 10. With mask, fins and snorkel swim a distance of 1,200 feet (360 meters) on the surface.
- 11. Swim a distance of 10 feet (3 meters) underwater, recover and clear mask and partially clear snorkel.
- 12. Swim using mask, snorkel and fins for a distance of 33 feet (10 meters) underwater without surfacing.
- 13. Achieve proper weighting.
- 14. Demonstrate proper descent and ascent procedures.
- 15. Use SCUBA at rest, then perform mask clearing, regulator clearing and regulator recovery.
- 16. Use SCUBA at rest, then perform mask removal, controlled breathing without mask and mask replacement.
- 17. Practice buoyancy control and body posture on the surface and underwater.
- 18. Use SCUBA at rest, then remove and replace weight ballast system.
- 19. Demonstrate instrument monitoring.
- 20. Swim underwater using SCUBA without mask for 30 feet (9 meters).
- 21. Swim on surface while wearing full SCUBA gear and switch from the regulator to snorkel and back at least 3 times for a distance of 135 feet (40 meters).
- 22. Swim on back (face up) on the surface while wearing full SCUBA gear for a distance of 100 feet (30 meters).
- 23. Swim on the surface using SCUBA and BCD as a front-oriented surface float for a distance of 100 feet (30 meters).
- 24. Do a lateral Emergency Swimming Ascent (ESA).
- 25. Simulate a vertical ESA while free-diving from the deep end of a pool.
- 26. **Recommended:** (not required) Simulate or perform (Instructor's option) manual gas sharing emergency. The simulation is accomplished by the gas-donor diver handing regulator off as in actual gas sharing, but gas-recipient diver breathes two breaths from his/her own regulator, then returns the regulator back to the gas-donor diver. At this time, the gas-recipient diver regulator is removed from the mouth until the simulated regulator is handed back. The gas-recipient diver must swim a distance of at least 25 feet (8 meters) (without breathing, and exhaling slowly) and commence simulated gas sharing. At least three breaths are taken at rest, followed by a 10-minute swim at a normal swim rate or equivalent method.
- 27. Perform alternate gas source (octopus, secondary regulator, alternate air, etc.) gas sharing drill both as receiver and donor. The gas-recipient diver must swim a distance of at least 30 feet (9 meters) (without breathing, and exhaling slowly) to the gas-donor diver and commence gas sharing on the alternate second stage. Remain at rest for three breaths and then swim, sharing gas, at a normal swim pace.
- 28. Demonstrate the ability to perform simple underwater navigation without the use of a compass.
- 29. On the surface practice the quick release of the weight ballast system.
- 30. On the surface, remove and replace SCUBA gear. Repeat underwater on the bottom, at a depth no greater than 20 fsw (6 msw).

#### Recommended watermanship evaluation, to be completed in the last confined water session (80%=passing (80 / 100 Points))

#### Skill One (25 points)

Swim a distance of 30 feet (9 meters) underwater with mask, snorkel and fins, then don SCUBA gear. Score 25 points if completed successfully on the first attempt, and subtract 5 points for each additional attempt required to successfully complete skill.

#### Skill Two (25 points)

Swim with SCUBA gear at the surface breathing through a snorkel for a distance of 300 feet (90 meters).

<u>Points</u>	<u>Time (mm:ss)</u> Po	oints
ss 25	12:01 to 12:15	13
23	12:16 to 12:30	11
21	12:31 to 12:45	09
19	12:46 to 13:00	06
17	over 13 minutes	03
15	not completed	00
	21 19 17	ass 25     12:01 to 12:15       23     12:16 to 12:30       21     12:31 to 12:45       19     12:46 to 13:00       17     over 13 minutes

#### Skill Three (25 points)

While wearing SCUBA gear, take one breath at the surface and swim for a distance of 30 feet (9 meters) underwater without breathing to another diver (regulator is kept in mouth during swim). Upon reaching the other diver, commence gas sharing and continue swimming at rate of approximately 60 feet (18 meters) per minute for a distance of 400 feet (120 meters).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
7 minutes or less 25	09:01 to 09:20 19	10:31 to 10:40 07
07:01 to 07:30 24	09:21 to 09:40 17	10:41 to 10:50 05
07:31 to 08:00 23	09:41 to 10:00 15	10:51 to 11:00 03
08:01 to 08:20 22	10:01 to 10:10 13	over 11 minutes 01
08:21 to 08:40 21	10:11 to 10:20 11	not completed 00
08:41 to 09:00 20	10:21 to 10:30 09	·

#### Skill Four (25 points)

Swim with SCUBA gear underwater for a distance of 1,500 feet (450 meters) while maintaining good buoyancy control.

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
16 minutes or less 25	18:21 to 19:00 19	20:21 to 20:30 14	21:16 to 21:30 07
16:01 to 16:30 24	19:21 to 19:40 18	20:31 to 20:40 13	21:31 to 21:45 06
16:31 to 17:00 23	19:41 to 20:00 17	20:41 to 20:50 12	21:46 to 22:00 04
17:01 to 17:30 22	20:01 to 20:10 16	20:51 to 21:00 11	over 22 minutes 02
17:31 to 18:00 21	20:11 to 20:20 15	21:01 to 21:15 09	not completed 00
18:01 to 18:20 20			-

# Diver First Aid

#### A. Purpose

1. This Program is designed to teach divers how to manage diving accidents and other injuries that may occur at a dive site.

### **B.** Prerequisites

1. None.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Diver First Aid Student Kit pertaining to First Aid.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of diver first aid.

### **D. Equipment Requirements**

1. IANTD Diver First Aid Student Kit.

### E. Program Limits

1. No diving activities may exceed the qualifications of the student.

### F. Water Skills Development

1. There are no specific water skills required for this Program.

# Oxygen Administrator

# A. Purpose

1. This Program is designed to teach people how to utilize and administer oxygen for dive accident management.

# **B.** Prerequisites

1. None.

# C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Rescue Diver Student Kit pertaining to Oxygen Administration.
- 2. Complete the written exam with a minimum score of 80%.

# D. Equipment Requirements

1. IANTD Rescue Diver Student Kit (Oxygen Administration section).

# E. Program Limits

1. There are no specific limits for this Program.

# F. Water Skills Development

1. There are no waterskills required for this Program.

# Automatic External Defibrillator (AED)

### A. Purpose

1. This Program is designed to teach people how to utilize an AED for dive accident management.

### **B.** Prerequisites

1. IANTD CPR or other recognized CPR certification (May be taken in conjunction with AED).

### **D. Program Content**

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Rescue Diver Student Kit pertaining to AEDs.
- 2. Complete the written exam with a minimum score of 80%.

### **E. Equipment Requirements**

1. IANTD Rescue Diver Student Kit (AED section).

### F. Program Limits

1. There are no specific limits for this Program.

### G. Waterskills Development.

1. There are no waterskills required for this Program.

# Cardio Pulmonary Resuscitation (CPR)

# A. Purpose

1. This Program is designed to teach people how to perform CPR on people who are old enough to dive for dive accident management.

# B. Prerequisites

1. None

# D. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Rescue Diver Student Kit pertaining to CPR.
- 2. Complete the written exam with a minimum score of 80%.

# E. Equipment Requirements

1. IANTD Rescue Diver Student Kit (CPR section).

# F. Program Limits

1. There are no specific limits for this Program.

# G. Waterskills Development.

1. There are no waterskills required for this Program.

# Advanced Open Water Diver

#### A. Purpose

- 1. This mid-level Continuing Education Program is designed to enable IANTD Open Water (Nitrox) Divers to extend their proficiency in the water and to gain more supervised practical experience.
- 2. This Program qualifies a diver to dive to a maximum depth of 100 fsw (30 msw).

### **B.** Prerequisites

- 1. Must be a qualified IANTD Open Water (Nitrox) Diver or any Entry Level Diver equivalent.
- 2. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 12 years of age for Junior Diver qualification, or a minimum or 18 years of age without guardian approval.

# C. Program Content

- 1. The Program must include a minimum of 120 minutes of OW bottom time completed within 4 to 7 dives. If the skill and bottom time requirements are completed earlier, the Program may be completed within 4 SCUBA dives
- 2. At least one dive must be to between 82-100 fsw (25-30 msw).
- 3. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Advanced Open Water Diver Student Kit.

### D. Equipment Requirements

- 1. IANTD Advanced Open Water Diver Student Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

### E. Program Limits

- 1. There may be no more than 8 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster, up to a maximum of 12 students with 2 IANTD Divemasters per class session.
- 2. No dives may be conducted to depths greater than 100 fsw (30 msw).
- 3. Appropriate safety decompression stops must be performed.

# F. Water Skills Development

- 1. Develop and demonstrate buoyancy control by performing precise hovering and ascent rates.
- 2. Perform at least 5 skill dives (more than 1 skill dive may be completed per dive) from the following core group: Altitude; Search & Rescue, Salvage, Drift, Night, Deep, Wreck (non-penetration), River, Survey, Simulated Decompression Stops with use of a pony cylinder, Triangle / Complex Navigation, Boat, or Shore Entry.
- 3. Perform at least one alternate second stage gas sharing ascent dive. Both divers must swim a distance of at least 25 feet (8 meters) towards each other (without breathing, and exhaling slowly) and commence simulated gas sharing using the alternate second stage of the gas-donor diver.

# Rescue Diver

# A. Purpose

1. This Program is designed to develop proficiency in self- and buddy-rescue.

# B. Prerequisites

- 1. Must be a qualified Advanced Open Water Diver or must provide proof of a minimum of 10 logged dives.
- 2. Must be qualified in Diving First Aid, Oxygen Administrator and CPR.
- 3. AED certification is recommended.
- 4. Must be a minimum of 18 years of age.

NOTE: The Diving First Aid, CPR and Oxygen Administrator Programs may be taken concurrently with the Rescue Diver Course.

# C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Rescue Diver Student Kit and meet all minimum performance skills.
- 2. Develop proficiency in all skills listed below to the satisfaction of the instructor within 4 dives.

# D. Equipment Requirements

- 1. IANTD Rescue Diver Student Kit.
- 2. Equipment used during this Program must be appropriate for the environment and in good working order.

# E. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster, up to a maximum of 8 students with 2 IANTD Divemasters per class session.
- 2. No dives may be conducted to depths greater than 60 fsw (18 msw).
- 3. No ESA may be conducted from depths greater than 33 fsw (10 msw).
- 4. All rescue skills must be under the direct supervision of the instructor. However, Divemasters may direct the skills, provided the instructor is in a position to intervene in a reasonable time fashion if needed.
- 5. When performing rescue skills, no more than one team per Divemaster may be active at the same time, and all participants must be within a distance that the instructor may maintain indirect supervision ability.
- 6. On search patterns and other group proficiency skills, the entire group may participate to increase the learning ability.

# F. Water Skills Development

1. A confined water session must be completed before conducting any OW dives.

#### Missing Diver Skills (Required)

2. Determine last sighting of missing diver, and then conduct a straight-line search to last know location, followed by search patterns (circle, grid etc.).

#### Buddy Assist Skills (Required)

- 3. Emergency Options Drill:
  - a. Instructor allows divers to become separated by a short distance (e.g.: as divers are swimming, stop one diver without the other's knowledge and allow the un-stopped diver to continue for about three kick cycles). Then have the stopped diver swim (without breathing, and slowly exhaling) to the un-stopped diver and communicate a need for gas, followed by gas sharing on alternate second stage or on a Rebreather with adequate bailout, perform the appropriate Rebreather gas management drill for out-of-air diver.
  - b. Then repeat the same drill, except that this time you will instruct the buddies do a gas-sharing ascent.
  - c. At a depth no greater than 20 fsw (6 msw), separate buddy pair(s) from each other by a distance slightly greater than water depth, and inform one of the divers that he or she is out of gas. Allow this diver to choose the safer way to deal with the problem. If the diver decides that the surface is closer and more realistic, and performs an ESA, terminate the drill and get the divers together again.

- d. Repeat the previous step at a depth greater than 20 fsw (6 msw), with the two divers separated by 20 feet (6 meters). Gas sharing or appropriate Rebreather Gas Management Drill for out-of-air diver should become a more appropriate option as the depth increases.
- 4. Assist an exhausted diver underwater.
- 5. Assist a disoriented diver.
- 6. Assist a tired buddy on surface, using fin pushes and diver tows.

#### Diver and Buddy Rescue skills (Required)

- 7. Use of extensions, surface floats, ring buoys, etc. from boat or dock.
- 8. In-water use of extensions and buoys.
- 9. Blocks and parries from panicky diver.
- 10. Cross equipment/chest carry and control carry.
- 11. Swimming rescue of struggling victim.
- 12. Rescue of an injured or unconscious diver from bottom.
- 13. Rescue breathing and "dosie-doe", and other carries enabling ease of mouth to mouth rescue breathing.
- 14. Equipment removal and transporting diver to a stable platform and/or beach (practice methods of ditching equipment, techniques for getting victim out of water).
- 15. Simulate CPR and EMS activation.

#### **Required Skills Final Check**

16. Locate a missing diver who is unconscious and coordinate a complete rescue.

#### Personal Rescue Skills (Recommended)

- 17. Simulate having fallen from a boat in shirt, pants and shoes. Once in water, remove shoes, then remove pants and inflate them as a surface float. Remain afloat for 10 minutes. Trap air bubble in back of shirt to give additional buoyancy.
- 18. Perform drown proofing (remain motionless in the water while holding arms and legs...arch to get a breath of air and float until next breath is needed) for 3 minutes.
- 19. Perform hand signals to get rescue.
- 20. Surface dive to 20 fsw (6 msw) or swim laterally for 20 feet (6 meters) and recover a 10-pound weight.
- 21. Remain afloat for 10 minutes by any means.
- 22. Surface dive to 20 fsw (6 msw) or swim laterally for 20 feet (6 meters) and simulate an ESA. Be sure to exhale continuously as if on SCUBA, and to have a good body flare as the surface is approached.
- 23. With SCUBA gear, perform one ESA from 10 fsw (3 msw), one ESA from 20 fsw (6 msw) and one ESA from 30 fsw (9 msw). Concentrate on slow ascents, controlled continuous exhalation and good body flare. Repeat several times.
- 24. Swim without a mask or with a flooded mask on SCUBA for 3 minutes.
- 25. Swim SCUBA with a flooding second stage (leaking exhaust valve) for 2 minutes.
- 26. Simulate a wide-open free flow and use regulator for 2 minutes.
- 27. Simulate a blown O-ring between the cylinder and regulator, and have student turn valve on as they inhale and off as they exhale for 2 minutes.

# EAN<sub>x</sub> Diver

# A. Purpose

- 1. This Program is designed to provide Sport Divers with a safer than air breathing medium for enjoying dives in the 40 to 130 fsw (12 to 39 msw) depth ranges. The diver may elect to dive the "mix" on EANx tables, or dive conservatively using air dive computers or air tables.
- 2. The IANTD EANx Diver qualification may be taught as a single Program or combined with a variety of the IANTD Advanced or Specialty Diver Programs.
- 3. The Program covers the use of EANx mixes in the range of 21% to a maximum of 40% oxygen.

# **B.** Prerequisites

- 1. Must be a qualified Open Water Diver.
- 2. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 12 years of age for Junior Diver qualification, or a minimum of 18 years of age without guardian approval.

# C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD EANx Diver Student Kit.
- 2. Program covers all EANx mixes from 21% to a maximum of 40% oxygen, emphasizing the use of EAN 32 and EAN 36.
- 3. It is recommended that, all divers perform two dives on an EANx mixture of between 24 and 40% oxygen.

# D. Equipment Requirements

- 1. IANTD EANx Diver Student Kit.
- 2. Equipment used during this Program must be appropriate for the environment and in good working order.

# E. Program Limits

- 1. No dives may be conducted to depths greater than the student's previous qualification, or a maximum of 130 fsw (39 msw).
- 2. Appropriate safety decompression stops must be performed.

# F. Qualification Requirements

1. Upon completion of the lecture portion and passing the written exam, the IANTD EANx Diver card will be issued.

# G. Water Skills Development

- 1. If OW dives are made, the Instructor may elect to use the applicable EANx tables or plan the dives as if air were used, thus capitalizing on the maximum physiological safety factor.
- 2. If OW dives are made students must develop a dive plan appropriate for the mixes being used on both dives.

### Semi Closed Circuit Rebreather Diver (SCR)

#### A. Purpose

1. This Program is designed to train divers in the safer use and technology of SCR Diving.

#### **B.** Prerequisites

- 1. Must be qualified as an EANx Diver (IANTD EANx Diver program may be taken in conjunction with this program).
- 2. Must be a minimum of 16 years of age.

#### D. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD SCR-specific Rebreather Student Kit.
- 2. Complete a written exam specific to the SCR with a minimum score of 80%.
- 3. This Program must include a minimum of 200 minutes of combined confined water and OW dive time; completed within at least 4 Open Water dives using the SCR (additional Open Water dives are recommended).
- 4. If crossing over from another SCR or CCR complete the SCR specific lectures, a confined water session and 2 OW dives

#### E. Equipment Requirements

- 1. IANTD SCR-specific Rebreather Student Kit.
- 2. SCR and bailout as required.

#### F. Program Limits

- 1. Supply Gas cannot contain great than a 1.6 PO<sub>2</sub> at the maximum depth of the dive.
- 2. Remain within the limits of the IANTD Sport Diver Programs.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Demonstrate familiarity with breathing loop gas management and control.
- 3. Demonstrate familiarity with open circuit options and procedures.
- 4. Demonstrate familiarity with buoyancy control.
- 5. Emergency procedures for the following:
  - a. Hypoxia.
  - b. Hyperoxia.
  - c. Hypercapnia.
  - d. Flooded breathing loop.
- 6. Pre- and Post-Dive Procedures.

## Open Water Closed Circuit Rebreather Diver (OW CCR)

#### A. Purpose

 This Program is designed to train competent divers in the safer use and technology of basic CCR diving with no decompression, up to 1.2 PO<sub>2</sub> and to depths up to 70 fsw (21 msw). This course may be used as an entry-level course to SCUBA diving if combined with the OW program in which case OC dives will be substituted with CCR dives. The diver can dive to a maximum depth of 100 fsw (30 msw) if they are guided or supervised dive by a rebreather supervisor or instructor. The training requirements here in are IANTD minimums. Other manufacturer's requirements MAY APPLY for specific rebreathers so consult manufacturers literature prior to teaching.

### **B.** Prerequisites

- 1. Must be either an IANTD EANx Diver or equivalent or it may be taken in conjunction with the EANx Diver class.
- 2. Must be a minimum of 17 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD OW CCR-specific Diver Student Kit.
- 2. This program must include a confined water session, followed by 4 OW dives with a minimum of 300 minutes of in-water training time on the specific rebreather for which the diver is being trained.
- 2. Students must pass the specific OW CCR test with a minimum score of 80%.
- 3. The student and instructor must carry sufficient gas to ascend safely to the surface in the event of a bailout to OC is required and to adequately support the OC bailout practices.

### D. Equipment Requirements

- 1. IANTD OW CCR-specific Diver Student Kit.
- Approved specific Rebreather suitable for the training exposure. If the student does not take possession of, or have access to a CCR within 3 months of completion of training a refresher course will be required on the CCR that must include review of operations of that CCR, and two dives on the CCR.
- 3. Instructors must have the IANTD Waterproof Skills Sheets on all confined and OW dives.

### E. Program Limits

- 1. There may be no more than 4 students per Instructor, except for when a CCR qualified Dive Supervisor is used at which time the ratio may be increased to 6 students.
- 2. No dives may be conducted to depths greater than 70 fsw (21 msw).
- 3. The set point of the CCR must not exceed 1.0 PO<sub>2</sub> for all dives within the class All dives must be completed within the IANTD oxygen CNS% limits with air or EANx (not to exceed 1.0 PO<sub>2</sub> at max depth of dive) as the only diluents.
- 4. The instructor may use a Rebreather or OC during training sessions however it is recommended that the instructor use a rebreather at all times to better demonstrate skills and monitor the student.

### F. Water Skills Development - Open Water Training must include the following skills:

- 1. Complete all in water skills for OW diver if not already qualified as a diver
- 2. Pre-dive checks including a pre-breathe.
- 3. Switch to low set point for descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range
- 4. Switch to planned set point once the diver is at the planned dive depth or set point change depth
- 5. In water leak and buddy leak check. If conditions prohibit this after entry this then immediately upon arrival at a stable depth. Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.
- 6. Descend and ensure gas addition is made.
- 7. Open Circuit bailout practice for Hyperoxia, Hypoxia, Flooded loop, and Hypercapnia (including at least two OC ascents from approximately 60 fsw (18 msw).
- 8. Adjust buoyancy and trim.
- 9. Proper operation of computer controlling and secondary equipment.
- 10. PO<sub>2</sub> gauge monitoring to be done no more frequently that once a minute and no less often than once every four minutes
- 11. Buoyancy and trim on the bottom during ascent and at safety stops.
- 12. Safety Stop practice.

- 13. Post dive briefing.
- 14. At least two times on each dive, Instructor is to signal to student(s) that they have an emergency. On the last two dives, present the following situations. The student is to perform appropriate actions and write down the suspected problem. At least once per dive perform complex (multi-part) scenarios such as Hypoxia or Hyperoxia drill for donor while gas sharing by handing bailout cylinder or other bailout mechanism to an out of gas diver ascend.

Inhalation counterlung inflating rapidly	Suspect solenoid failure open ; switch to OC
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Switch to OC
Difficult breathing counterlung at correct volume	Switch to OC
Weakness in legs	Switch to OC
Shortness of breath	Switch to OC
Feeling of well being	Switch to OC
Feel like you are about to blackout	Switch to OC
Muscle twitching	Switch to OC
Nausea	Switch to OC
Ears ringing	Switch to OC
Hearing or visual abnormalities	Switch to OC
Feeling dizzy	Switch to OC
Extreme quietness (absence of solenoid noise)	Suspect electronics off, or solenoid defective
Solenoid fires but no oxygen injected	Suspect oxygen supply empty or cylinder off (valve closed) or inline
Solehold lifes but no oxygen injected	valve closed
Diluent not being added	Suspect diluent cylinder empty or cylinder off (valve closed) or inline
	valve closed
2 cells read high but low cell checks with diluent PO <sub>2</sub>	Switch to OC
2 cells read high and check with diluent PO <sub>2</sub>	Switch to OC

## **Recreational Trimix Diver**

### A. Purpose

- 1. This Program is designed to provide Sport Divers with a breathing medium for extending their dives to Sport Diving Depths by using ENDs in the 40 to 80 fsw (12 to 24 msw) depth ranges. The diver may elect to dive the "mix" on tables or computers.
- 2. The IANTD Recreational Trimix Diver qualification may be taught as a single program or combined with a variety of the IANTD Advanced or Specialty Diver Programs.
- 3. The program qualifies divers to do no stop required dives using Recreational Trimix Gas mixtures to a depth of 100 fsw (30 msw) or deeper up to students' previous qualification level.

### B. Prerequisites

- 1. Must be a qualified Advanced Open Water Diver or equivalent and EANx Diver or take the EANx Diver course in conjunction with the Recreational Trimix Diver course.
- 2. Must provide proof of a minimum of 15 logged dives.
- 3. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Recreational Trimix Diver Student Kit.
- 2. Program covers all Recreational Trimix gas mixes from 28% to a maximum of 40% oxygen, and Helium concentrations yielding an END no greater than 80 fsw (24 msw) emphasizing the use of 30 / 25.
- 3. Two dives on Recreational Trimix mixtures are required in this course.
- 4. It is recommend that this program be taught as a combined Deep Diver course with a minimum of two dives being completed on Recreational Trimix gas mixtures.

### D. Equipment Requirements

- 1. IANTD Recreational Trimix Diver Student Kit.
- 2. Equipment used during this Program must be appropriate for the environment and in good working order.

### E. Program Limits

- 1. No dives may be conducted to depths greater of 130 fsw (39 msw) and no END greater than 80 fsw (24 msw).
- 2. Appropriate safety decompression stops must be performed. (Safety stops will be at 30 fsw (9 msw) 20 fsw (6 msw) and 15 fsw (4.5 msw) each stop will be a minimum of 1 minute).
- 3. No dives having a mandatory decompression Stop may be made (unless the course is combined with one requiring stops)
- 4. No dives made me made with a  $PO_2$  greater than 1.6.

### G. Qualification Requirements

1. Upon completion of the lecture, passing the written exam and completion of the dives satisfactorily the IANTD Recreational Trimix Diver card will be issued.

- 1. Demonstrate; Ability to plan Recreational Trimix dives, good buoyancy control, and proficiency in body posture underwater for a streamlined swimming posture and avoidance of silt.
- 2. Configure dive equipment for the most streamlined and efficient method and demonstrate proficiency in its management.
- 3. Perform gas sharing drill on the alternate second stage, while having the out of gas diver swim 40 feet (12m) to the donor without breathing.
- 4. Perform one gas sharing drill on ascent.

## Deep Diver

#### A. Purpose

- 1. This Program is designed to provide responsible training to divers who plan to dive to a maximum of 130 fsw (39 msw) on air.
- The IANTD Deep Diver Program trains divers in skills, performance, theory and planning of deep dives. This Program remains within the commonly practiced depth of 130 fsw (39 msw), and is the first sanctioned international Program to provide proper training in safe deep diving skills and performance.
- 3. It is recommended that this Program be taught in conjunction with the IANTD EANx Diver Program or the Recreational Trimix Diver Program or the IANTD Advanced EANx Diver Program.
- 4. This program qualifies divers to dive to 130 fsw (39 msw).

#### **B.** Prerequisites

- 1. Must be qualified as an IANTD Advanced Open Water Diver or equivalent.
- 2. Must provide proof of a minimum of 10 logged dives.
- 3. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 12 years of age for Junior Diver qualification, or a minimum of 18 years of age without guardian approval.

#### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Deep Diver Student Kit.
- 2. This Program must include a minimum of 100 minutes of OW bottom time completed within 4 dives, 2 of which must be to depths between 100 fsw (30 msw) and 130 fsw (39 msw).

#### **D. Equipment Requirements**

- 1. IANTD Deep Diver Student Kit.
- 2. Same as Equipment requirements listed in the general Sport Diver Programs overview.

#### E. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster, up to a maximum of 8 students with 2 IANTD Divemasters per class session.
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 3. Appropriate safety decompression stops must be performed.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Swim in full underwater equipment for 5 minutes.
- 3. Calculate RMV from gas consumed during a 10-minute swim (based on change in cylinder pressure).
- 4. Become proficient in the following propulsion techniques: modified flutter, modified frog, modified dolphin and standard shuffle kicks.
- 5. Demonstrate buoyancy control by:
  - a. A timed ascent at a rate of 20 ft (6 m) per minute.
  - b. Hover at constant depth for 3 minutes.
  - c. Swim 75 feet (23 meters) in full equipment without mask.
  - d. Deploy a lift bag in less than 2 minutes.
  - e. Air sharing skills or appropriate Rebreather gas management drill for Out-of-air diver
- 6. If a Rebreather is used by the student, the appropriate Rebreather drills must be incorporated.
  - a. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 45 feet (14 meters), and commence gas sharing. While gas sharing, continue to swim for at least 4 minutes while maintaining a normal swim rate; or appropriate Rebreather gas management drill for out-of air diver.
  - b. Repeat the above step with the gas-recipient diver wearing a fully-flooded mask (or no mask at all), and swim 2 minutes while sharing gas; or appropriate Rebreather gas management drill for out-of air diver.

# NOTE: All gas sharing drills are via the alternate second stage and not manual air sharing from the same second stage.

- 7. Perform valve shutdowns: change regulators and shut the primary-regulator valve off, then reopen valve and repeat as if the secondary (backup) regulator had malfunctioned. Repeat until skill (both valve openings shutdowns) is completed in less than 2 minutes.
- 8. Close and open tank valves on all dives.
- 9. Deploy lift bag on at least 2 occasions.
- 10. Remove and replace tank and BCD at surface on at least one dive.
- 11. All ascents are to be at a rate of 30 feet (9 meters) per minute or slower.

#### Recommended watermanship evaluation, to be completed during course (80% = passing (80 / 100 Points)).

This evaluation may be accomplished in one session or during a sequence of training dives.

#### Skill One (25 points, to be completed in confined water)

Two buddies with blacked-out masks (or closed eyes) face each other at a distance of 50 feet (15 meters) apart, and follow a line or other reference towards each other, without breathing. Upon contact, they commence gas sharing (alternate second stages or pony cylinder hand-off) and maintain contact with each other while swimming for a distance of 900 feet (275 meters).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
15:41 to 16:00 20	17:01 to 17:15 14	18:01 to 18:20 06
16:01 to 16:15 19	17:16 to 17:30 12	18:21 to 18:40 04
16:16 to 16:30 18	17:31 to 17:45 10	18:41 to 19:00 02
16:31 to 16:45 17	17:46 to 18:00 08	over 19 minutes 00
16:46 to 17:00 16		
	15:41 to 16:00       20         16:01 to 16:15       19         16:16 to 16:30       18         16:31 to 16:45       17	15:41 to 16:002017:01 to 17:151416:01 to 16:151917:16 to 17:301216:16 to 16:301817:31 to 17:451016:31 to 16:451717:46 to 18:0008

#### Skill Two (25 points)

Ascend from a depth of at least 60 fsw (18 msw) at a rate of 30 feet (9 meters) per minute, plus a 10-minute safety stop at a depth of 15 fsw (4.5 msw), with depth variation no greater than 3 fsw (1 msw) for the duration of the stop. The ascent is to be controlled via the BCD, not by pulling up a line. Score 25 points if performed correctly. Subtract one point for each one foot (0.3 meter) per minute variation in ascent rate during the overall average ascent to 15 (4.5 meters), and subtract 1 point each time the student changes depth by more than 3 fsw (1 msw) during the 10-minute safety stop.

#### Skill Three (25 points)

Deploy a lift bag from a depth of 20 fsw (6 msw), and at least 30 fsw (9 msw) above the bottom. The diver must complete the deployment and maintain depth within a maximum of ten feet (3 meters) variation (i.e., the diver cannot ascend to a depth shallower than 10 fsw, (3 msw) or descend to a depth greater than 30 fsw (9 msw)) during deployment of the bag. Score 25 points if the skill is completed successfully, and subtract 5 points for each depth variation greater than 10 fsw (3 msw).

#### Skill Four (25 points, confined water)

Use of malfunctioning equipment:

- 1. Use a free-flowing regulator for 3 minutes.
- 2. Maintain buoyancy control via oral inflation of the BCD for five minutes.

During this time, swim for a distance of at least 50 feet (15 meters) at one depth, then ascend by 3 fsw (1 msw) and repeat, then descend by 3 fsw (1 msw) and repeat. This should be followed by a controlled ascent and controlled descent at a rate of no more than 10 fsw (3 msw) per minute, while swimming in an area with a variation in depth. Score 25 points if all skills are completed successfully, and subtract 4 points for each violation of procedure on any of the skills, or if any skill needs to be repeated.

### Advanced EANx Diver

#### A. Purpose

- 1. This Program is designed to extend the diver's knowledge in the use of EANx for Sport diving. It further develops diving skills and provides a greater understanding of the EANx concept of diving.
- 2. The Program employs EANx mixes up to 1.5 PO<sub>2</sub>.
- 3. This program qualifies divers to do dive to 140 fsw (42 msw) and do decompression stops required dives up to 15 minutes.

#### B. Prerequisites

- 1. Must be qualified as an IANTD EANx Diver and IANTD Deep Diver with proof of a minimum of 30 logged dives or sufficient experience to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 2. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.

#### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Advanced EANx Diver Student Kit.
- 2. This Program must include a minimum of 120 minutes of OW bottom time completed within 4 dives, 2 of which must be to depths between 100 fsw (30 msw) and 140 fsw (42 msw) If combined with a Deep Diver Program, the total dive time for both Programs must include a minimum of 160 minutes completed within 6 or more dives. Even if the time and skill requirements are met within fewer than 6 dives, the minimum 6 dives must be made. If combined with a Deep Diver Program 3 dives must be made to depths between 100 fsw (30 msw) and 140 fsw (42 msw).
- 3. Students are taught the use of EANx mixtures to a maximum of 40% oxygen for the non decompression portions of the dive. To teach the fundamentals of safety and decompression stops EANx mixtures that contain 1.5 PO<sub>2</sub> for decompression may be used. This too is calculated at the deepest depth to which the gas will be switched.

#### D. Equipment Requirements

- 1. IANTD Advanced EANx Diver Student Kit.
- 2. A safety or decompression gas cylinder (if used) rigged as either a pony or stage cylinder. Gas cylinders must be oxygen clean and oxygen serviceable where needed.

#### E. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster, up to a maximum of 8 students with 2 IANTD Divemasters per class session.
- 2. No dives may be conducted to depths greater than 140 fsw (42 msw).
- 3. All dives must be conducted using EANx (maximum 40% oxygen). PO<sub>2</sub>'s as high as 1.5 may be used at the decompression or safety stops. No dives made me made with any PO<sub>2</sub> greater than 1.5.
- 4. All appropriate safety or required decompression stops must be performed.
- 5. Mandatory decompression stops are limited to a maximum of 15 minutes.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Demonstrate proficiency in a variety of dive techniques and employ precision buoyancy control.
  - a. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) without a mask for a distance of at least 50 feet (15 meters), and commence gas sharing; or appropriate Rebreather gas management drill for out-of air diver. While gas sharing, swim for 3 minutes, then replace and clear mask.
- 3. On an OW dive, demonstrate dive planning abilities, especially for avoiding CNS exposure risk.
- 4. Perform a gas sharing ascent using the alternate second stage.
- 5. Perform valve shutdowns on each dive.
- 6. Deploy lift bag 2 times, using it as an ascent platform.
- 7. Demonstrate a safe attitude and awareness to the Instructor's satisfaction.
- 8. Remove and replace tank and BCD at a depth greater than 20 fsw (6 msw).
- 9. Remove and replace tank and BCD at surface.
- 10. Demonstrate acceptable navigation / orientation abilities.

- 11. In an area where a depth is attainable beyond the planned depth, evaluate that the student has the discipline not to exceed the dive plan.
- 12. Demonstrate accident management / control techniques as described in text.
- 13. If entering the Program based on previous experience, complete the IANTD Deep Diver water skills.

#### Recommended watermanship evaluation, to be completed during the Advanced EANx course (80% = passing (80 / 100 Points)

#### Skill One (25 points, confined water)

Swim for a distance of 900 feet (270 meters) underwater in SCUBA gear. Score 25 points if completed in less than 7 minutes, and subtract one point for each additional 30 seconds required to complete the skill.

#### Skill Two (25 points, confined water)

Swim for a distance of 50 feet (15 meters) in SCUBA gear without breathing, then commence gas sharing and swim for a distance of 250 feet (75 meters) without a mask.

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
4 minutes or less 25	06:01 to 06:10 19	07:11 to 07:20 11
04:01 to 04:30 24	06:11 to 06:20 18	07:21 to 07:30 09
04:31 to 05:00 23	06:21 to 06:30 17	07:31 to 07:40 07
05:01 to 05:20 22	06:31 to 06:40 16	07:41 to 07:50 05
05:21 to 05:40 21	06:41 to 07:00 15	07:51 to 08:00 03
05:41 to 06:00 20	07:01 to 07:10 13	over 8 minutes 00

#### Skill Three (25 points, confined water)

Remove SCUBA gear underwater and perform a free ascent to the surface. Take three breaths, perform a surface dive, and don SCUBA gear. Repeat removal and replacement on surface. Score each as follows, then average the two scores for the overall skill score.

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
2 minutes or less 25	03:31 to 03:45 19	04:41 to 04:50 08
02:01 to 02:20 24	03:46 to 04:00 18	04:51 to 05:00 06
02:21 to 02:40 23	04:01 to 04:10 16	05:01 to 05:30 04
02:41 to 03:00 22	04:11 to 04:20 14	05:31 to 06:00 02
03:01 to 03:15 21	04:21 to 04:30 12	over 6 minutes 00
03:16 to 03:30 20	04:31 to 04:40 10	

#### Skill Four (25 points)

Simulated emergency lift bag ascent from a depth no shallower than 50 feet (15 meters), including a 3-minute safety stop. Evaluate on skill in deploying lift bag and on maintaining a tight reel and neutral buoyancy during safety stop. Score 25 points if performed correctly, and subtract 3 points for each mistake made, or five points if the student jams the reel or has to repeat the skill.

## Advanced Recreational Trimix Diver

#### A. Purpose

- 1. This Program is designed to extend the diver's knowledge in the use of EANx for Sport diving. It further develops diving skills and provides a greater understanding of the EANx concept of diving. It is also intended to supplement the skills of Recreational Trimix Divers.
- 2. The Program employs EANx mixes from 21% oxygen to a maximum of 1.5 PO<sub>2</sub> combined with a Helium content that maintains an END no greater than 80 fsw (24 msw) may be used.
- 3. This program qualifies divers to dive to 160 fsw (48 msw) and perform decompression stops required dives up to 15 minutes.

#### B. Prerequisites

- 1. Must be qualified as an IANTD Recreational Trimix Diver or Nitrox Diver and IANTD Deep Diver with proof of a minimum of 30 logged dives or sufficient experience to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 2. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.

#### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Advanced Recreational Trimix Diver Student Kit.
- 2. This Program must include a minimum of 120 minutes of OW bottom time completed within 4 dives, 2 of which must be to depths between 100 fsw (30 msw) and 160 fsw (48 msw). If combined with a Deep Diver Program, the total dive time for both Programs must include a minimum of 160 minutes completed within 6 or more dives. Even if the time and skill requirements are met within fewer than 6 dives, the minimum 6 dives must be made. If combined with a Deep Diver Program 3 dives must be made to depths between 100 fsw (30 msw) and 160 fsw (48 msw). All dives deeper than 80 fsw (24 msw) must be made on Recreational Trimix mixtures.
- 3. Students are taught the use of Recreational Trimix mixtures from 28% to a maximum of 40% oxygen and with the helium content having an END no greater than 80 fsw (24 msw) for diving. EANx mixtures of 1.5 PO<sub>2</sub> oxygen should be used for safety and decompression stops.

#### D. Equipment Requirements

- 1. IANTD Advanced Recreational Trimix Diver Student Kit.
- 2. A safety or decompression gas cylinder (if used) rigged as either a pony or stage cylinder. Gas cylinders must be oxygen clean and oxygen serviceable where needed.

#### E. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students for each assisting IANTD Divemaster, up to a maximum of 8 students with 2 IANTD Divemasters per class session.
- 2. No dives may be conducted to depths greater than 160 fsw (48 msw). Adequate He must be used to provide an END no Greater than 80 fsw (24 msw)
- 3. All dives must be conducted using EANx or Trimix (maximum 40% oxygen) as a bottom mix. PO<sub>2</sub>'s as high as 1.5 may be used at the decompression or safety stops.
- 4. All appropriate safety or required decompression stops must be performed.
- 5. Mandatory decompression stops are limited to a maximum of 15 minutes

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Demonstrate proficiency in a variety of dive techniques and employ precision buoyancy control.
  - a. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) without a mask for a distance of at least 50 feet (15 meters), and commence gas sharing; or appropriate Rebreather gas management drill for out-of air diver. While gas sharing, swim for 3 minutes, then replace and clear mask.
- 3. On an OW dive, demonstrate dive planning abilities, especially for avoiding CNS exposure risk.
- 4. On at least two dives use Recreational Trimix with a minimum of 28 % oxygen and a maximum of 40% oxygen and adequate Helium to provide an END no greater than 80 fsw (24 msw)

- 5. On all dives using Helium do a safety stop at 30, 20 and 15 fsw (9, 6 and 4.5 msw) for a minimum of 1 minute each or a safety stop at 30 fsw followed by a if needed and planed decompression stops at 20 and 15 fsw (6 and 4.5 msw) for no more than 10 minutes maximum based on EAN 50 as a decompression gas
- 6. Perform a gas sharing ascent using the alternate second stage.
- 7. Perform gas switches to a decompression gas mixture no greater than 1.5 PO<sub>2</sub> on at least two dives
- 8. Perform valve shutdowns on each dive.
- 9. Deploy lift bag 2 times, using it as an ascent platform.
- 10. Demonstrate a safe attitude and awareness to the Instructor's satisfaction.
- 11. Remove and replace tank and BCD at a depth greater than 20 fsw (6 msw).
- 12. Remove and replace tank and BCD at surface.
- 13. Demonstrate acceptable navigation / orientation abilities.
- 14. In an area where a depth is attainable beyond the planned depth, evaluate that the student has the discipline not to exceed the dive plan.
- 15. Demonstrate accident management / control techniques as described in text.
- 16. If entering the Program based on previous experience, complete the IANTD Deep Diver water skills.

#### Recommended watermanship evaluation, to be completed during the Advanced EANx course (80%= passing (80 / 100 points)

#### Skill One (25 points, confined water)

Swim for a distance of 900 feet (270 meters) underwater in SCUBA gear. Score 25 points if completed in less than 7 minutes, and subtract one point for each additional 30 seconds required to complete the skill.

#### Skill Two (25 points, confined water)

Swim for a distance of 50 feet (15 meters) in SCUBA gear without breathing, then commence gas sharing and swim for a distance of 250 feet (75 meters) without a mask.

<u>Time (mm:ss) Points</u>	Time (mm:ss) Points	Time (mm:ss) Points
4 minutes or less 25	06:01 to 06:10 19	07:11 to 07:20 11
04:01 to 04:30 24	06:11 to 06:20 18	07:21 to 07:30 09
04:31 to 05:00 23	06:21 to 06:30 17	07:31 to 07:40 07
05:01 to 05:20 22	06:31 to 06:40 16	07:41 to 07:50 05
05:21 to 05:40 21	06:41 to 07:00 15	07:51 to 08:00 03
05:41 to 06:00 20	07:01 to 07:10 13	over 8 minutes 00

#### Skill Three (25 points, confined water)

Remove SCUBA gear underwater and perform a free ascent to the surface. Take three breaths, perform a surface dive, and don SCUBA gear. Repeat removal and replacement on surface. Score each as follows, then average the two scores for the overall skill score.

Time (mm:ss) Point	S	Time (mm:ss)	Points	Time (mm:ss)	Points
2 minutes or less 25	i l	03:31 to 03:45	19	04:41 to 04:50	08
02:01 to 02:20 24		03:46 to 04:00	18	04:51 to 05:00	06
02:21 to 02:40 23		04:01 to 04:10	16	05:01 to 05:30	04
02:41 to 03:00 22		04:11 to 04:20	14	05:31 to 06:00	02
03:01 to 03:15 21		04:21 to 04:30	12	over 6 minutes	00
03:16 to 03:30 20	) (	04:31 to 04:40	) 10		

#### Skill Four (25 points)

Simulated emergency lift bag ascent from a depth no shallower than 50 feet (15 meters), including a 3-minute safety stop. Evaluate on skill in deploying lift bag and on maintaining a tight reel and neutral buoyancy during safety stop. Score 25 points if performed correctly, and subtract 3 points for each mistake made, or five points if the student jams the reel or has to repeat the skill.

## Wreck Diver and Cavern Diver

#### A. Purpose

1. This Program is designed to develop wreck and cavern diving skills within the limits of light penetration and to insure that divers are aware of self-responsibility and capable of risk management in overhead environments. The Program may be taught using either air or EANx.

### B. Prerequisites

- 1. Must be qualified as an IANTD Advanced Open Water Diver or equivalent.
- 2. Must provide proof of a minimum of 10 logged dives.
- 3. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 12 years of age for Junior Diver qualification, or a minimum of 18 years of age without guardian approval.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Wreck Diver Student Kit (TBA) or IANTD Cavern Diver Student Kit (TBA).
- 2. If combined with the IANTD EANx Diver Program, or if the student is already qualified as an IANTD EANx Diver, the student may use a mixture of EANx in the range of 21% through 40% oxygen.
- If combined with the IANTD Advanced EANx Diver Program, or if the student is already qualified as an IANTD Advanced EANx Diver, the student may use a mixture of EANx in the range of 21% through 40% oxygen as a dive gas, and safety or required decompression stops may involve deco mixes up to 1.5 PO<sub>2</sub>.
- 4. Complete all lectures
- 5. A continuous guideline that allows for a safe exit to the entrance will be in place at all times during training in a wreck or cavern environment.
- 6. A minimum of 120 minutes of bottom time must be completed in the overhead environment within 4 to 6 dives.
- 7. Land Drills:
  - a. Use of guide lines.
  - b. Following guide lines with and without vision.
  - c. Simulation of silt-outs, etc.

### D. Equipment Requirements

- 1. IANTD Wreck Diver Student Kit (TBA) or IANTD Cavern Diver Student Kit (TBA).
- 2. A dual-outlet (H or Y) valve is recommended. If a Rebreather is used, it must be equipped with adequate bailout to return to the surface.
- 3. A 40-inch (1-meter) long hose is to be attached to one of the second stages on the primary gas supply.
- 4. It is recommended a long hose (5 7 feet / 1.5 2 meters) in length for gas sharing be carried by each diver.
- 5. Primary reel and/or safety reel.
- 6. Two lights.

### E. Program Limits

- 1. There may be no more than 4 students per Instructor inside the overhead environment.
- 2. Unobstructed exit / surface light must always be visible.
- 3. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 4. The Rule of Thirds must be applied from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
- 5. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed before conducting any dives in an overhead environment.
- 2. Become proficient in the following propulsion techniques: modified flutter, modified frog, modified dolphin and standard shuffle kick.
- 3. Swim a distance of 75 feet (23 meters) without a mask.
- 4. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 45 feet (14 meters), and commence gas sharing; or appropriate Rebreather gas management drill for out-of air diver. While gas sharing, continue to

swim for a distance of at least 200 feet (60 meters) while maintaining a swim rate of approximately 60 feet (18 meters) per minute.

- 5. For wreck dives, practice deployment of lift bag.
- 6. Determine SAC rate and RMV.
- 7. Practice use of reel and line.
- 8. In the overhead environment, practice running the line and making tie wraps.
- 9. With eyes closed, follow a guideline in the overhead environment.
- 10. Share breathing gas while following the guideline, both with eyes open and with eyes closed.
- 11. Perform an "S" drill prior to commencement of all dives.

## **DPV** Diver

#### A. Purpose

1. This Program is designed to provide training in the use of Diver Propulsion Vehicles (DPV's) either in Open Water or if the prerequisites are met, the Cave environment. The purpose of this course is to expose divers to conservation concerns and ethical responsibilities that present themselves during DPV use either for extended penetration, touring, or exploration.

#### B. Prerequisites

- 1. Must be a minimum of 18 years of age. (Age requirement can be waived for cause with notarized statement.).
- 2. Must be qualified as IANTD Advanced Open Water Diver (or equivalent) and have a minimum of 25 logged dives.
- 3. If certification is for Cave DPV Diver, student must be qualified as an IANTD Cave Diver or equivalent (NACD, NSS/CDS, CDAA, etc.), be qualified as a Multi-Stage Diver or have a minimum of 50 (non-training) logged cave dives.

### C. Program Content

- 1. This Program must include a minimum of 160 minutes of bottom time (240 minutes bottom time for Cave DPV Diver) completed within at least 4 dives. No crediting of dives is allowed. Instructors are encouraged to exceed these minimums. Even if the time and skill requirements are met within fewer than 4 dives, the minimum 4 dives must be made.
- 2. All lecture and theory material must be completed including but not limited to: Motives and risks for DPV diving, Equipment configuration and streamlining techniques for DPV diving, Procedures and techniques for DPV diving, Task loading and dive / gas planning needs for DPV diving, Gas sharing and towing techniques, Conservation considerations for DPV handling, minimizing specific environment impact and considerations for the increased range of travel / penetration and safe charging, transport and maintenance procedures for DPV's.

### D. Equipment Requirements

- 1. All items listed in the Equipment Requirements for the environment being trained in. (i.e. Sport Diver programs, IANTD Cave Diver or IANTD EANx Cave Diver Program)
- 2. For Cave DPV Diver, specialty equipment as specified in the IANTD *Cave Diver Student Workbook*
- 3. IANTD DPV Diver Student Kit (TBA).

#### E. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. No dives may be conducted to depths greater than the qualification of the student.
- 3. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
- 4. All dives must be planned using the best gas in consideration of PO<sub>2</sub>, END and Decompression requirements.
- 5. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
- 6. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
- 7. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed prior to conducting any dives.
- 2. Demonstrate proficiency in the following propulsion techniques: modified flutter, modified frog, modified dolphin, and standard shuffle kicks while maintaining the control of the DPV.
- 3. Perform at least 2 gas sharing drills of Instructor's choice.
- 4. While using DPV's perform at least 3 towing methods, at least two of which are while sharing gas.
- 5. Demonstrate the ability to safely (and without contact to the cave if Cave DPV Diver) drop and recover DPV on all dives. (Exception when performing circuits and traverses in Cave DPV Diver)
- 6. Demonstrate perfection of buoyancy and trim while using a DPV.
- 7. On at least one occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or a real out of gas situation.
- 8. While using DPV's perform two towing methods while gas sharing.
- 9. Simulate a failure of all DPV's in team and swim the units to exit point (if Cave DPV Diver swim units out of cave).
- 10. If a rebreather is used, the appropriate modifications to the above skills must be made.

## Introductory Cave Diver

### A. Purpose

1. This Program is designed to provide an introduction to the cave diving environment for Sport Divers.

### B. Prerequisites

- 1. Must be qualified as an IANTD Overhead Environment Diver or equivalent qualification (NSS/CDS, NACD or CDAA Cavern Diver).
- 2. Must provide proof of a minimum of 25 logged dives or sufficient experience to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.

### C. Program Content

- 1. A continuous guideline that allows for a safe exit at the entrance will be in place at all times during training in a cave.
- 2. A minimum of 90 minutes of bottom time must be completed in caves within 4 to 6 dives. There may be no crediting of previous dive time for this Program.
- 3. Land drills:
  - a. Use of guide lines.
  - b. Following guide lines with and without vision.
  - c. Perform lost line procedure

### D. Equipment Requirements

- 1. IANTD Cave Diver Student Kit.
- 2. All students must be taught the concept of gas matching.
- 3. All bottom mix tanks must be equipped with dual-outlet (H or Y) valves or double tanks with dual orifice manifold.
- 4. A 5-foot (1.5-meter) to 7-foot (2-meter) long hose must be attached to one of the second stages on the primary gas supply.
- 5. A primary reel and a safety reel.
- 6. Three lights: one primary light and two backup lights.

### E. Program Limits

- 1. There may be no more than 3 students per Instructor inside the cave with starting visibility of 30 feet (9 meters), or 2 students per Instructor with starting visibility of 20 feet (6 meters), or 1 student per Instructor with starting visibility of 12 feet (4 meters).
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 3. Each diver must have at least 60 cubic feet (1700 free liters) of breathing gas.
- 4. The Rule of Thirds will be applied on all dives using single tanks and the rule of 1/6<sup>th</sup> on all dives using double tanks.
- 5. All appropriate safety or required decompression stops must be performed
- 6. No jumps from one line to another may be made in this program

### F. Qualification Requirements

- 1. The Introductory Cave Diver who is trained in a single tank is only qualified to dive a single tank with the Introductory Cave Diver qualification.
- 2. The Introductory Cave Diver trained in doubles may be qualified to use doubles ONLY if the rule of 1/6<sup>ths</sup> is used.

- 1. A confined water session must be completed before conducting any cave dives.
  - a. Have 2 divers, starting at a distance of 40 feet (12 meters) apart, swim in a simulated out-of-air situation (without breathing, and exhaling slowly) towards each other with eyes closed, following a guide line, and begin gas sharing; or appropriate rebreather gas management drill for out-of air diver.
  - b. After resting for 3 breaths, divers should swim following the guideline to its source, while continuing to share breathing gas. Both divers must maintain contact with the line.
  - c. Follow the guideline with mask blacked out or eyes closed for at least 40 feet (12 meters) (confined water)
  - d. Follow the guideline with mask off for at least 40 feet (12 meters) (confined water)

- 2. Simulate a primary light failure on exiting the cave
- 3. Share gas along line for a reasonable distance while on a cave dive.
- 4. Simulate gas failure with valve shutdowns for both primary and secondary regulators. The entire drill must be completed in less than 1 minute.
- 5. Practice regulator shutdowns while swimming without a noticeable change in swim pace.
- 6. Practice use of reels and lines.
- 7. With eyes closed, follow line and maintain contact with both the buddy and guide line (while on a cave dive).
- 8. Share gas and maintain contact with line while keeping eyes closed or lights off (while on a cave dive).
- 9. Demonstrate proficiency in propulsion techniques taught in the Overhead Environment Program. Share gas with first diver leading by 3 body lengths. Second diver, while simulating an out of air situation, gets lead diver's attention and begins to share gas for a reasonable distance. During at least one cave dive, the student is to do an out of air drill at a random selection time and without the buddy being aware of whether it is a real or practice session.
- 10. Perform an "S" drill prior to commencement of all dives.

## Specialty Diver

#### A. Purpose

These Programs have been designed to provide qualified divers with specialty training in areas such as Underwater Modeling, Underwater Photography, Underwater Videography, Night Diver, Salvage Diver, Wall Diver, DPV Diver, Hyperbaric Chamber Operations, Full Face Mask Diver, Surface Supplied Diver, METS or other specialty training areas.

### B. Prerequisites

- 1. Must be a qualified diver.
- 2. Must be a minimum of 15 years of age with a parent or guardian authorization, or a minimum of 18 years of age without guardian approval.
- 3. Other Prerequisites may apply as per the Program outline approved in writing by the Training Director or designated Licensee Region's representative.

### C. Program Content

1. As per the Program outline approved in writing by the Training Director or designated Licensee Region's representative. All Programs must include the appropriate training dives with a minimum of 4 dives. The specialty must have stress management as part of the curriculum.

### D. Equipment Requirements

- 1. Equipment used during this Program must be appropriate for the environment and in good working order.
- 2. Additional equipment may be required, as per the Program outline approved in writing by the Training Director or designated Licensee Region's representative.

### E. Program Limits

- 1. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 2. Additional limits may apply, as per the Program outline approved in writing by IAND, Inc./IANTD World Headquarters, or designated Licensee Region's representative.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. As per the Program outline approved in writing by the Training Director or designated Licensee Region's representative.

### **Underwater Theatrical Performer**

#### A. Purpose

- 1. This program is designed to provide performers and talent with comprehensive training in using Scuba diving techniques as part of entertainment related activities.
- 2. This program emphasizes the skills and knowledge needed to develop a strong understanding of the physics and physiology, reliable skills, safe diving practices, comfort, efficiency and specific skill vocabulary to work with show divers.
- 3. This program also emphasizes skill mastery, physical and mental preparation needed to prepare talents or performers to rapidly, efficiently and safely adapt from potential strenuous performing activity to the underwater environment and techniques
- 4. Upon completion performers or talents will be qualified to perform underwater activities to a limit of 30 fsw (9 msw) with the presence and supervision of qualified support or safety divers.
- 5. This training is designed to provide students with the necessary skills and knowledge to continue education with specific advanced training related to their activity or the integration of an existing performance.

#### **B.** Prerequisites

- 1. Must be a minimum of 16 years of age with a parent or guardian authorization or a minimum of 18 years of age.
- 2. Must pass Scuba diving physical and provide IANTD physical form signed by a licensed physician prior attending the course.
- 3. Candidates must swim 200 yards and tread water for 10 minutes prior to any in water training.
- 4. A tympanogram test performed by a licensed physician to guarantee proper Eustachian tube function is strongly recommended.

#### C. Program Content

- 1. This program is composed of two modules: Module 1 teaches the basics of Scuba diving, theory and skills and is to be performed for the water development portion in Scuba Gear. Module 2 emphasizes the theatrical technical environment, specific equipment, support systems and skills specific to the underwater performer or talent. Module 2 water skills are to be performed without Scuba gear, with or without environmental protection but in a way that mimics one's natural buoyancy.
- 2. The theory portion of the course is to be performed in a classroom type environment using Power Point presentation and demonstration video support pertaining to the theory in the IANTD Underwater Theatrical Performer Student Kit.
- 3. The course should be completed over a five day period in four hour segments and total a minimum of 20 hours of education for classroom, water skill development, written tests and water skill evaluation combined.
- 4. Students must complete water skill evaluation for both Module 1 & 2 and the written exam with a minimum score of 80%.

#### D. Equipment & Environmental Requirements

- 1. IANTD Underwater Theatrical Performer Student Kit.
- 2. In water training must be conducted in a minimum of 10 fsw (3 msw) and a maximum of 25 fsw (7 msw) in a calm and comfortable environment. This environment should have minimum temperature of 80° F.
- 3. For Module 1: Fulfill all equipment requirements as specified in the general sport diver programs overview.
- 4. For Module 2: Hand-rails or pull ropes and air stations are required.

#### E. Program Limits

- 1. This program qualifies divers to perform underwater activities only under the supervision of support or show divers.
- 2. For Module 1: In-water training and evaluation, fulfill all equipment requirements as specified in the general sports divers programs overview.
- 3. For Module 2: In-water training and evaluation; hand-rails or pull ropes and air stations are required.

#### F. Qualification Renewal

- 1. Complete a yearly in water aptitude test based on Module 2 in water evaluation skills
- 2. Complete a yearly written theory aptitude exam with a minimum score of 80%

## Elite Diver

### A. Purpose

1. This program has been designed to provide divers with the highest certification in the recreational level before entering the professional diving circle in teaching or in technical diving. Divers completing 5 IANTD Specialties or more may be eligible to apply for the Elite Diver Certification.

### B. Prerequisites

- 1. Must be an IANTD Advanced Open Water Diver.
- 2. Must be a minimum of 18 years of age or 15 years of age with a parent or guardian authorization.
- 3. Must have 5 IANTD specialty certification or more.
  - a. Core IANTD specialties for this certification are; Deep Diver, EANx Diver, Rescue Diver and Navigation Diver
  - b. Other IANTD specialties divers can obtain are: Night Diver, DPV Diver, Underwater Photographer, Boat Diver, Salvage Diver, Drift Diver or other specialty training area.

### C. Program Content

1. This Program must include a minimum of 2 dives. The candidate must brief each dive. The Instructor must be in the water at all times during the dives, and by the end of the 2 dives the Instructor must be convinced that the candidate has conducted those dives in a safe manner. The instructor must decide if more dives are required to reach the level required to be an Elite Diver.

### D. Equipment Requirements

- 1. Equipment used during this Program must be appropriate for the environment and in good working order.
- 2. Additional equipment may be required, as per the Program outline Region's representative.

### E. Program Limits

- 1. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 2. Only IANTD Specialties are accepted for this course.

## Public Safety Diver

#### A. Purpose

1. To train divers to operate in waters of limited visibility while employing structured methods in the retrieval of submerged evidence from a maximum depth of 100 fsw (30 msw) and the potential use of this evidence in a court room.

#### B. Prerequisites

- 1. Must be a qualified IANTD Advanced Open Water Diver or equivalent.
- 2. Must be a minimum of 18 years of age.

### C. Program Content

- 1. The Program must include all academic lectures consisting of Public Safety Diving Techniques and Environmental Analysis as well as methods of processing a crime scene and 3 days of practical application with IANTD Course-specific Slides pertaining to the theory in the IANTD Public Safety Diver Student Kit.
- 2. The Program may be completed within 6 SCUBA dives.

#### D. Equipment Requirements

- 1. IANTD Public Safety Diver Student Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview with two separate cutting tools.

#### E. Program Limits

- 1. There may be no more than 8 students per Instructor in open water.
- 2. No dives may be conducted to depths greater than 100 fsw (30 msw).
- 3. Course dives deeper than 40 fsw (12 msw) require the direct supervision of an IANTD PSD Instructor.
- 4. Appropriate safety stops must be performed and all dives shall be within normal no-decompression limits.
- 5. As an industry standard all solo Public Safety Diving shall be accomplished with a diver that is tethered.
- 6. Any equipment used in the open water phase of the course must be trained with in the confined water session of the course.

- 2. Confined water Skills session must be completed before any OW Dives. All skills will be performed with a blacked out mask for record. A Safety Diver will be in the water during all phases of confined water work.
  - a. Swim in a simulated out of air situation (without breathing and exhaling slowly) for a distance of at least 30 feet (9 meters) with full gear then commence gas sharing with another diver viva long hose.
  - b. Swim at least 2 minutes simulating a complete buoyancy failure.
  - c. Simulate gas failure and switch to redundant gas source.
  - d. Demonstrate deployment of a safety reel and lift bag whiled maintaining a stable depth.
  - e. Remove and replace gear at the surface and at depth
  - f. Perform entangled diver drill (safety diver drill) While being tethered and equipped with a redundant gas supply the Operations Diver will be entangled in a net or rope. The Safety Diver while being tethered and in a blacked out mask will have until the Operations diver's in water time expires to untangle the operational diver.
  - g. Body packing. Two line tethered divers approach from different directions and package a training dummy in a Body Recovery System. Deploy a lift bag attached to the package and swim to the shallow end of the pool.
  - h. Search line deployment. One or two divers may be used at a time. Divers will deploy a search line the length of the pool and practice a walking line search and a jack stay search.
- 3. Open Water Phase
  - a. All students will assume the role of the Team Commander, Operations Diver, Safety Diver, and Line Tender
  - b. Four Different Search Pattern Dives will be conducted
  - c. One Body Packing and Recovery Dive
  - d. One Evidence Recovery / Chain of Custody Dive
  - e. All dives will last a minimal of 20 minutes run time

## **Diving Medical Technologies**

### A. Purpose

1. This Program is designed to train competent individuals in the safer use and technology of diving medicine, recompression therapies and recompression chamber operations.

### B. Prerequisites

1. Must be a minimum of 18 years of age.

### C. Program Content

- 1. Students will complete all required knowledge reviews and pass the exam with a grade of at least 80%.
- 2. Perform at least 8 chamber dives where the student is the Recompression Chamber Operator.
- 3. Perform at least 8 ventilations (60 seconds duration on full flow) once at desired depth and remain with in 1 foot of desired depth.
- 4. Satisfactorily demonstrate all emergency procedures.

### D. Equipment Requirements

- 1. Recompression Chamber Life Support from IANTD Item # M-7201 or equivalent text(s) approved in writing by the Board of Directors (written approval will be issued by IAND, Inc./IANTD World Headquarters).
- 2. Recompression chamber or mock recompression chamber.

### Life Support Systems Service Technician

#### A. Purpose

1. This Program is designed to train competent personnel in the safe preparation and maintenance of life support systems to be used in SCUBA diving, and with breathing gases other than air. This includes service, maintenance and visual inspection procedures.

#### **B.** Prerequisites

- 1. Must be qualified as an IANTD EANx Blender.
- 2. Must have a need to become a Technician (such as working for an EANx Training or Full Service Facility). If not affiliated with a facility must be located in a remote area.
- 3. Must be recommended by an IANTD Instructor or Facility.
- 4. Provide proof of Technician status through manufacturers that the Technician will be servicing equipment or qualification through the Institute of American Scuba Technicians (IAST).

#### C. Program Content

- 1. Complete all the classroom material in the specified manuals.
- 2. This Program must include a minimum of 3 hours of hands-on experience doing VIPs, and 2 hours of servicing equipment for use with breathing gases other than air.
- 3. A written test must be passed with a minimum score of 80%, and must demonstrate Service Technician capability.

#### D. Equipment Requirements

- 1. IANTD-approved mixing station.
- 2. Work bench and suitable maintenance equipment and tools.
- 3. All equipment used in this Program must be compatible with the mixtures being prepared and the method in which the EANx is being blended.

#### E. Program Limits

1. There are no specific limits for this Program.

## **Decompression Specialist**

### A. Purpose

- 1. This Program is designed to give the diver a better and deeper understanding of the models used for generating dive tables and dive computer profiles. The program will also train students to use dive tables, dive computers and decompression software programs.
- 2. Upon completion of this course dives will be made to 130 fsw (39 msw) using EAN 1.5 to 1.61 PO<sub>2</sub> for decompression provided no stops are deeper than 20 fsw (6 msw) or longer than 15 minutes

### B. Prerequisites

1. Must be a qualified Advanced EANx Diver or equivalent.

### C. Program Content

- 1. Complete all theory in the IANTD Decompression Software Specialist Student Kit.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate the use of decompression software.

### D. Equipment Requirements

1. IANTD Decompression Specialist Diver Student Kit.

### E. Program Limits

1. There are no diving activities required for this Program.

### F. Water Skills Development

1. There are no specific water skills required for this Program.

## Open Water Side Mount Diver

#### A. Purpose

- 1. Familiarize the diver with the techniques, equipment and mindset required for Side Mount diving.
- 2. Enable divers to proficiently assemble and use Side Mount equipment.
- 3. Teach divers the proper techniques to safely conduct dives that warrant the use of Side Mount equipment.

### B. Prerequisites

- 1. Must be qualified as an IANTD Advanced Open Water Diver or equivalent.
- 2. Have a minimum of 25 logged dives.
- 3. Be at least 18 years of age.
- 4. Be proficient in buoyancy skills.

### C. Program Content

- 1. This program must include120 minutes of bottom time while in Side Mount configuration within at least 3 dives.
- 2. Theory and gear setup All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Side Mount Diver Student Kit.
- 3. One confined water session (gear orientation)
- 4. One Open Water dive (gear tuning, skills, fining technique, buoyancy & trim)
- 5. Two Open Water dives (skills, proficiency)
- 6. Students taking the Side Mount Program must accumulate 120 minutes of bottom time while diving in Side Mount configuration (in addition to the confined water session).
- 7. Students taking the Side Mount Program while using Nitrox, or Oxygen for decompression must be certified as an Advanced Nitrox Diver or proof of equivalent experience with stage cylinders and decompression theory. If taking the course on Normoxic Trimix or Trimix students must be previously qualified at these levels or taking the course in conjunction with the Side Mount course
- 8. Due to the unique nature of diving a Side Mount configuration, crediting of bottom time will be allowed ONLY for divers with proof of 10 or more dives in Side Mount configuration. Only a credit of 40 minutes of bottom time will be allowed and it is recommended that instructors allow crediting of dive time only for extremely competent divers.

### D. Equipment Requirements

- 1. IANTD Side Mount / No Mount Diver Student Kit.
- 2. Two single cylinders (40 cubit feet or larger).
- 3. Two (2) Primary regulators. Each must provide ample gas flow at all depths. Each gas source must have its' own dedicated submersible pressure gauge.
- 4. A primary BCD. A backup BCD is required if the student cannot maintain buoyancy in the event of a bladder failure. If a dry suit is used, it may serve as the backup BCD.
- 5. Dive tables, depth gauge, dive timer or a dive computer and cutting device.
- 6. Basic diving equipment: mask, fins, and exposure suit suitable for conditions at the training site(s).

### E. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. No dives may be conducted to depths greater than the qualification of the student.
- 3. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
- 4. Air-qualified divers may not use Oxygen or EANx for decompression.
- 5. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
- 6. All dives must be completed within both the IANTD Oxygen CNS% and OTU limits.
- 7. All appropriate safety or required decompression stops must be performed.

- 1. A confined water / equipment orientation session must be completed before conducting any dives.
- 2. Swim with equipment to be used in program until comfortable with it.
- 3. Perform valve shutdowns combined with switches to opposite cylinder in horizontal and vertical position.
- 4. Perform neutral buoyancy drills in horizontal and vertical positions while in Side Mount configuration.

- 5. Perform cylinder removal in horizontal and vertical positions.
- 6. Confined water: Swim 50 feet (15 meters) underwater with one cylinder removed (hand-held), replace cylinder, repeat with opposite cylinder.
- 7. Open water: Swim 50 feet (15 meters) with one cylinder removed (hand-held) and replace cylinder, repeat with opposite cylinder.

### EANx Blender

#### A. Purpose

1. This Program is designed to train competent personnel in the safe handling of oxygen and the preparation of EANx.

#### **B.** Prerequisites

- 1. Must have a need to become a blender (such as working for an EANx training or full service facility) If not affiliated with a facility must be a qualified Advanced EANx Diver and located in a remote area.
- 2. Must be recommended by an IANTD Instructor or Facility.
- 3. To be qualified to service specific brands or equipment for EANx use, the blender must be a Qualified Technician with the manufacturer of the equipment being serviced.

#### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Gas Blender Student Kit.
- 2. This Program must include a minimum of 2 hours of hands-on experience preparing EANx.
- 3. A written test must be passed with a minimum score of 80%, and must demonstrate mixing capability.

#### **D. Equipment Requirements**

- 1. IANTD Gas Blender Student Kit.
- 2. IANTD-approved mixing station.
- 3. Oxygen analyzer.
- 4. All equipment used in this Program must be compatible with the EANx mixtures being prepared and the method in which the EANx is being blended.

#### E. Program Limits

1. Blenders may not perform duties other than cylinder cleaning, visual inspections and gas mixing unless qualified as a Technician with the manufacturer of the equipment being prepared for EANx use.

## IAND, INC. / IANTD TECHNICAL DIVER PROGRAMS

### A. Purpose

1. These Programs are designed to provide quality instruction of IANTD Technical Diving qualification levels.

#### B. Prerequisites

- 1. In all IANTD Technical Diver Programs, lectures and confined water skills completed in another similar IANTD Technical Diver Program may be credited where applicable toward the new level of qualification.
- 2. Crediting of dives / bottom time and lectures is solely at the discretion of the Instructor.
- 3. Divers coming into IANTD Programs from other EANx and Technical Diver training agencies (NACD, NSS/CDS, CDAA, etc. or equivalent.) must demonstrate proof of equivalent skill and theory training or do a crossover equivalency Program.

### C. Texts / Media

1. All IANTD courses require Student Kits to certify divers. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD diver program name" followed by the words Student Kit.

### D. Equipment Requirements

- All students will be taught the concept of gas matching. All bottom mix tanks will be equipped with dual outlet valves. If a Rebreather is used, it must be equipped with adequate bailout to make a safe ascent to the decompression stop(s). The total team bailout should enable the diver to reach the surface safely including staged or transported (via surface support divers) bailout gas
- 2. Two primary regulators, one of which must have a second stage hose of 5 feet (1.5 meters) in length (longer hoses are recommended). This longer hose must be attached to one of the second stages to facilitate gas sharing.
- 3. One or more separate stage tank(s) sufficient for decompression must be carried by the diver.
- 4. All cylinders must be correctly labeled as to gas content according to IANTD Standards.
- 5. The oxygen or highest EANx regulator must have some form of guard or cover to prevent accidental use.
- 6. All independent breathable gas sources must feature a submersible pressure gauge.
- 7. A primary BCD and a backup BCD is required if a diver is using a wetsuit and is sufficiently negative in buoyancy that he/she cannot maintain floatation without the use of a BCD. If dry suits are used, the dry suit may be considered the emergency BCD floatation in lieu of a backup BCD. Lift bags and other buoyant sources may not be considered as redundant BCD's.
- 8. When performing dives in OW: If during confined water training it is discovered that the student cannot remove his/her equipment in less than 1½ minutes and/or if a buddy cannot, while having the student act as a victim in need of assistance, remove the student's equipment in under 1½ minutes, a quick-release mechanism on the harness will be required. IANTD recommends the use of a quick release ideally located below the shoulder D-ring, as close to the base of the harness as possible.
- 9. A lift bag of at least 50-lb. (22.5-kg) lift capacity and a line reel for deployment.
- 10. A backup cutting tool is recommended.
- 11. Decompression tables and accurate depth gauge, plus bottom timer device or a dive computer is required.
- 12. A backup dive computer or bottom timer/depth gauge is recommended.

### E. Program Limits

- 1. All Program Limits listed under the Sport Diver Programs overview section apply to all Technical Diving Programs, unless otherwise indicated.
- 2. On all IANTD Technical Diver Open Water Programs, the maximum Student to Instructor ratios permitted are based on entering the water with visibility of 25 feet (7.6 meters) or more. If the visibility upon entering the water is less than 25 feet (7.6 meters), the following modifications to Student to Instructor ratios apply:
  - a. If the visibility is between 19 feet (6 meters) and unlimited, the maximum Student to Instructor ratio is 4 to 1.
  - b. If the visibility is between 10 feet (3 meters) and 19 feet (6 meters) the maximum Student to Instructor ratio is 3 to 1.
  - c. If the visibility is between 8 feet (2.4 meters) and 10 feet (3 meters) the maximum Student to Instructor ratio is 2 to 1.
  - d. If the visibility is less than 5 feet (1.5 meters) the maximum Student to Instructor ratio is 1 to 1.
- 3. On all dives, the IANTD Dive Tables must be used as either the primary decompression management or as a backup to a dive computer or custom software program or other tables approved by the IANTD BOD.

## **Closed Circuit Rebreather Diver (CCR)**

#### A. Purpose

 This Program is designed to train competent divers in the safer use and technology of CCR for dives requiring up to 15 minutes of decompression. It is also especially useful to train divers who wish to dive up to 160 fsw (48 msw) if using diluent with helium or 140 fsw (42 msw) if using air as a diluent. The training requirements here in are IANTD minimums. Other manufacturer's requirements MAY APPLY for specific rebreathers so consult IANTD specific CCR course materials and manufacturers literature prior to teaching.

#### **B.** Prerequisites

- 1. Must be an IANTD Advanced EANx Diver or Advanced Recreational Trimix Diver or equivalent. Course may be taken as a combination program
- 2. Must be a minimum of 17 years of age.

#### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD CCR-specific Diver Student Kit.
- 2. This Program must include a confined water session, followed by 6 OW dives with a minimum of 500 minutes of in-water training time using the specific Rebreather on which they are being trained. If qualified OW CCR diver, the total in-water training time is decreased to 400 minutes and the dives are decreased to a minimum of 4 OW dives.
- 3. Students must complete the text with the units on which they wish to be qualified.
- 4. Students must pass the specific CCR test with a minimum score of 80%.
- 5. On a minimum of 4 dives the student must carry a single stage cylinder or other bailout gas adequate on which to safely ascent.
- 6. Two dives must be to or deeper than 50 fsw (15 msw) and two dives must be deeper than 100 fsw (30 msw).
- To qualify from one Closed Circuit Rebreather to another Closed Circuit Rebreather, a diver must have 12 CCR dives of which one must have been within 45 days of the program on the new CCR and must complete a minimum of 200 minutes of in-water training with at least 2 OW dives.
- 8. To qualify from a Semi-closed Circuit Rebreather to a Closed Circuit Rebreather, a diver with 20 or more SCR dives must complete a minimum of 400 minutes of in-water training in a combination of confined water and OW environments, with at least 6 OW dives. Divers with less than 20 SCR hours must complete the entire course.

#### D. Equipment Requirements

- 1. IANTD CCR-specific Diver Student Kit.
- Approved specific Rebreather suitable for the training exposure. If the student does not take possession of, or have access to a CCR within 3 months of completion of training a refresher course will be required on the CCR that must include review of operations of that CCR, and two dives on the CCR.
- 3. Instructors must have (students are recommended to have) the IANTD waterproof skills sheets on all confined and OW dives.

#### E. Program Limits

- 1. There may be no more than 4 students per Instructor, except for when a CCR qualified Dive Master is used at which time the ratio may be increased to 6 students
- 2. Mandatory decompression stops are limited to a maximum of 15 minutes.
- 3. No dives may be conducted to depths greater than 160 fsw (48 msw) in which case the END will not exceed 80 fsw (24 msw) if using diluent with helium or 140 fsw (42 msw) if using air as a diluent.
- 4. The set point of the CCR must not exceed 1.3 ATA, except for failed open solenoid drills. During the drill the set point may be set to 1.4 ATA to simulate the failed solenoid for the duration of the drill.
- 5. At safety or required deco stops the set point may be increased to 1.40 ATA.
- 6. The oxygen partial pressure of the bailout gas may not exceed 1.60 ATA at the MOD of the dive.
- 7. All dives must be completed within the IANTD oxygen CNS% limits.
- 8. All appropriate safety or required decompression stops must be performed
- 9. Only one stage / decompression bottle may be carried or used on any dive.
- 10. Diluent  $PO_2$  shall be not greater than 1.1.

- 1. A confined water session to must be completed before conducting any OW dives.
- 2. Prior to dives, students must use match gas turn points based on oxygen metabolism.

- 3. Pre-dive checks.
- 4. Pre-dive breathe.
- 5. Switch to low set point for descent and monitor the PO<sub>2</sub> to ensure it remains within the planned PO<sub>2</sub> range
- 6. Switch to planned set point once the diver is at the planned dive depth or set point change depth
- 7. In water leak and buddy leak check. If conditions prohibit this after entry this then immediately upon arrival at a stable depth. Where practical this may be accomplished between just below the surface to 20 fsw (6 msw) deep.
- 8. Descend and insure gas addition is made.
- 9. Open Circuit bailout (static and dynamic drills, including at least two OC ascents to approximately 20 fsw (6 msw). On one dive ascend a minimum of 30 fsw (9 msw) and record time it took and amount of gas used. Post dive based on this drill plan the amount of total bail-out gas that would have been needed in a real situation
- 10. PO<sub>2</sub> gauge monitoring to be done no more frequently that once a minute and no less often than once every four minutes
- 11. Become proficient in these propulsion techniques: modified flutter, modified frog, modified dolphin, standard shuffle kicks.
- 12. Buoyancy and trim on the bottom during ascent and at safety or required stops.
- 13. Hyperoxia due to Solenoid stuck in open position. (Reset to a high PO<sub>2</sub> set point maintain at a value less than this by valve manipulation) On one dive do this for at least 10 minutes
- 14. Dive the unit in full manual mode for one dive.
- 15. Optimum Loop Volume.
- 16. Emphasis is to be made that once a bailout has been done the student should not go back on the unit if they are unsure of the cause of the problem or how to correct it.
- 17. Carry additional bailout on all dives (limited to a single stage cylinder)
- 18. SCR mode of diving. (Recommended 10 minutes) On one dive the diluent or the stage cylinder may be used for this drill.
- 19. Out-of-air, air gas sharing from OC bailout (donor remains on CCR or SCR). Stage may be handed off. Divers simulate a bailout situation and that the he diver has used 50% of their bailout gas, switch stages with the buddy diver and at the instructor's discretion switch back.
- 20. Simulate manual gas control with valve shutdowns.
- 21. Deploy lift bag in less than 1½ minute, and repeat at least 5 times during the Program.
- 22. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
- 23. Practice removing and replacing a stage cylinder, both at rest and while swimming.
- 24. Post dive briefing
- 25. On CCR with the ability to upload and / or down load software the student must be taught to do so.

At least two times on each dive, Instructor is to signal to student(s) that they have an emergency. On the last two dives, present the following situations. The student is to perform appropriate actions and write down the suspected problem. At least once per dive perform complex (multi-part) scenarios such as Hypoxia or Hyperoxia drill for donor while gas sharing by handing bailout cylinder or other bailout mechanism to an out of gas diver Ascend.

Inhalation counterlung inflating rapidly	Suspect solenoid failure open
Feeling unusual	Switch to OC
Buoyancy has changed to very negative	Flooded loop
Difficult breathing counterlung at correct volume	Suspect flood or Hypercapnia
Weakness in legs	Suspect Hypercapnia
Shortness of breath	Suspect Hypercapnia
Feeling of well being	Suspect Hyperoxia / Hypoxia
Feel like you are about to blackout	Suspect Hypoxia
Muscle twitching	Suspect Hyperoxia
Nausea	Suspect Hyperoxia
Ears ringing	Suspect Hyperoxia
Hearing or visual abnormalities	Suspect Hyperoxia
Feeling dizzy	Suspect Hyperoxia
Extreme quietness (absence of solenoid noise)	Suspect electronics off, or solenoid defective
Solenoid fires but no oxygen injected	Suspect oxygen supply empty or cylinder off (valve closed) or inline valve closed
Diluent not being added	Suspect diluent cylinder empty or cylinder off (valve closed) or inline valve closed
2 cells read high but low cell checks with diluent PO <sub>2</sub>	Suspect two high cells are in error
2 cells read high and check with diluent PO <sub>2</sub>	Suspect cell off is wrong

## Technical Diver

#### A. Purpose

- This Program is designed to train divers to conduct dives to depths between 100 fsw (30 msw) and at the instructors option up to 170 fsw (51 msw) using custom blend breathing gas mixtures; and to provide greater understanding of custom blend breathing gas mixtures, a complete knowledge of the limits of any EANx mixture, and the use of EANx and oxygen for decompression.
- 2. The knowledge and skills taught in this program are more than adequate to qualify divers to perform Dives outside of training up to 180 fsw (54 msw)

#### B. Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Diver.
- 2. Must provide proof of a minimum of 100 logged dives, of which at least 30 were deeper than 90 fsw (27 msw) or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training."
- 3. Must be a minimum of 18 years of age.

#### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Technical Diver Student Kit up to the section on Normoxic Trimix and materials in the *Technical Diving Encyclopedia*.
- 2. This Program must include a minimum of 220 minutes of open-water run time completed within at least 4 dives.
- 3. Two of the dives must be to depths deeper than 130 fsw (39 msw) and no deeper than 170 fsw (51 msw) For students who need additional training dives, the remaining two dives may be in any depth between 40 fsw (12 msw) and 170 fsw (51 msw). At the Instructor's discretion and as specified in the Standards, previous dive experience may be credited. Even with the maximum credited dives from other Technical Programs Cave or IANTD Wreck, etc. and/or other dive experience the student must complete 3 dives 2 of which must be deeper than 100 fsw (30 msw) Even with maximum crediting of previous dive experience, this program must include a minimum of 3 dives, and *180* minutes of run time.
- 4. To complete the course within the minimum specified dives. With 2 or more additional dives, the student may graduate from the course with an overall average score of 6 points.

#### D. Equipment Requirements

- 1. IANTD Technical Diver Student Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Technical Diver Programs overview.

#### E. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students (for a maximum of 6 students) with an assisting IANTD Technical Diver Supervisor or Advanced EANx Instructor who is also qualified as a IANTD Technical Diver. The Instructor must be in control at all times.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).
- 3. Oxygen partial pressure may not exceed 1.40 during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
- 4. All appropriate safety or required decompression stops must be performed.
- 5. Decompression stops must be made using oxygen or EANx.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Swim with full underwater equipment required in Program for at least 5 minutes.
- 3. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters) with full gear, then commence breathing. Repeat previous drill with 2 divers swimming side-by-side, but have one diver hand-off the long-hose second-stage regulator to the other diver and commence gas sharing. After remaining at rest for 3 breaths, continue swimming at an average pace for at least 10 minutes.
- 4. Remove and replace equipment during confined water training (doubles and stage[s]), first on the surface, then on the bottom, in less than 2 minutes.

- 5. Remove the harness and cylinders from a simulated unconscious diver in less than 1 ½ minutes. (Students who exceed the time limit on this skill must have a quick-release added to their harness).
- 6. Divers using a quick-release on their harness or backpack must, in confined water, swim the system while the instructor disconnects the quick-release to simulate a failure. The student is to swim the system demonstrating control of buoyancy and body positioning with the quick disconnected for sufficient duration to satisfy the instructor that the student is capable of managing.
- Demonstrate an ability to respond to a single-bladder BCD failure by the two methods listed below. (Students using gear configurations that prevent accomplishment of these two skills will be required to wear a redundant BCD. Students who already have a redundant BCD or dry suit may use one of these alternates after attempting perform the methods without the use of the alternative.)
  - a. Completely deflate BCD and swim while maintaining buoyancy control for at least two minutes.
  - b. Completely deflate BCD, ascend safely to the surface, and remain afloat for at least 3 minutes.

NOTE: If at any time the student starts to over-exert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.

8. In confined water, have a student lose buoyancy by deflation of the BCD and then attempt to utilize a lift bag or other secondary buoyant device as a BCD.

NOTE: This skill is to demonstrate how effective these devices are and to reinforce that even if not suitable for a redundant BCD they still provide an option for self rescue in an emergency situation.

- 9. Two divers approximately 60 feet (18 meters) apart, with blacked-out masks or eyes closed, and while simulating an out of air situation (without breathing, and exhaling slowly), locate each other (using side of pool, rail on wreck, guide line, etc. for orientation) and begin gas sharing via long hose. After taking 3 breaths at rest, continue swimming while sharing gas for at least 3 minutes. This drill may be accomplished by having one student swim 30 feet (9 meters) to donor, and repeat for other diver.
- 10. While two divers are swimming side-by-side, the Instructor signals one to remain stationary while the other continues swimming for at least 3 more kicks. The stationary diver then simulates an out-of gas situation by swimming (without breathing, and exhaling slowly) to the other diver and commences gas sharing for at least 2 minutes. The instructor may substitute this skill by starting the drill at some time when the students are apart from each other by a comparable distance as would be achieved by 3 kicks.
- 11. Simulate gas failure with valve shutdowns for both primary and secondary regulators. The entire drill must be completed in less than 1 minute.
- 12. Close eyes, remove and replace stage cylinder, make regulator switch to stage cylinder, then switch back to primary gas supply.
- 13. Perform gas shutdown at least once per dive. (It is not necessary to remove mouthpiece.)
- 14. Remove and replace stage cylinder on all dives with as little buoyancy change as possible.
- 15. Demonstrate use of a safety reel and deploy a lift bag while maintaining a stable depth.
- 16. Demonstrate good dive technique and swimming (SCUBA) abilities combined with correct buoyancy control.
- 17. Determine RMV and demonstrate ability to calculate and perform gas matching.

### Normoxic Trimix Diver

#### A. Purpose

- 1. This Program is designed to train those who wish to dive to depths between 130 fsw (39 msw) and 200 fsw (60 msw), but who do not wish to breathe air below 130 fsw (39 msw). Trimix affords a means of reducing narcosis on dives to such depths.
- 2. The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 200 fsw (60 msw)

#### **B.** Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Diver. Divers qualified as Technical Diver, see note below under Program Content section.
- 2. Must provide proof of a minimum of 100 logged dives, of which at least 30 were deeper than 90 fsw (27 msw) or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. Must be a minimum of 18 years of age.

#### C. Program Content

- 1. All academic portions of the IANTD *Technical Diver Student Workbook* and appropriate specific Rebreather materials and reference text material from the IANTD *Technical Encyclopedia and a*ll lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Normoxic Trimix Diver Student Kit.
- 2. This Program must include a minimum of two Air or EANx or Normoxic (or greater than 18% oxygen) Trimix gas in OW (or overhead environments if the diver is already qualified or if taking this Program in conjunction with a cave or wreck course) to depths not to exceed 130 fsw (39 msw). On all of the dives the student must manage only one decompression cylinder.
- 3. This Program must also include a minimum of two dives in OW (or overhead environments if the diver is already qualified or if taking this Program in conjunction with a cave or wreck course) on Trimix using one gas switch. These dives may be performed at depths between 130 fsw (39 msw) and 200 fsw (60 msw). All dives must follow or use as backups to a dive computer the IANTD Tables using one gas switch. Dive computers with gas switching capability are recommended. Dives may be made on custom software generated tables provided it is a Program approved by IANTD.
- 4. This Program must include a minimum of 220 minutes of run time and a minimum of 4 dives using Air, EANx or Trimix.
- 5. To complete the course within the minimum specified dives. With 2 or more additional dives the student may graduate from the course with an overall average score of 6 points

NOTE: Divers who are already qualified as Technical Divers or Cave Divers or IANTD Wreck Divers may have the 2 air or EANx dives credited and only need to do the 2 Trimix dives between depths of 130 fsw (39 msw) and 200 fsw (60 msw). Plus complete the lecture on Normoxic Trimix in the workbook

#### E. Equipment Requirements

- 1. IANTD Normoxic Trimix Diver Student Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Technical Diver Programs overview. These courses may be taken with a student on a Rebreather.

#### F. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students (for a maximum of 6 students) with an assisting IANTD Trimix Diver Supervisor. If the course is conducted in conjunction with a Cave or Wreck Programs, the limits for those Programs will prevail.
- 2. Only one decompression cylinder may be used in this course.
- 3. No dives may be conducted to depths greater than 200 fsw (60 msw).
- 4. Oxygen partial pressure may not exceed 1.40 during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
- 5. Normoxic Trimix dives must be conducted using a mixture containing at least 20% oxygen (± 1%),
- 6. Equivalent Narcosis Depth (END) may not exceed 120 fsw (36 msw).
- 7. Surface oxygen must be available for use in the event of Decompression Illness (DCI).
- 8. All dives must be performed as a single dive team.
- 9. All appropriate safety or required decompression stops must be performed.

#### G. Water Skills Development

1. A confined water session must be completed before conducting any OW dives.

- 2. Swim with full underwater equipment (except stage cylinders) for at least 5 minutes.
- 3. Become proficient in the following propulsion techniques: modified flutter, modified frog, modified dolphin and standard shuffle kicks.
- 4. Deploy lift bag in less than 1½ minutes, and repeat at least 5 times during the Program.
- 5. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
- 6. Practice removing and replacing a stage cylinder. Must be completed at rest and while swimming.
- 7. Have 2 divers swim side-by-side, in full equipment, simulating an out-of-gas situation (without breathing, and exhaling slowly), for a distance of 60 feet (18 meters), then stop and begin breathing with one diver handing-off the long second stage hose to the other diver. Divers should remain a rest for 3 breaths, and then swim at an average pace for at least 10 minutes. On Rebreathers this drill should be done with the diver breathing from the stage cylinder.
- 8. Remove the harness and cylinders from a simulated unconscious diver in less than 1½ minutes. (Students who exceed the time limit on this skill must have a quick-release added to their harness).
- 9. Divers using a quick-release on their harness or backpack must, in confined water, swim the system while the instructor disconnects the quick-release to simulate a failure. The student is to swim the system demonstrating control of buoyancy and body positioning with the quick disconnect released for sufficient duration to satisfy the instructor that this type failure may be managed by the student.
- 10. Demonstrate an ability to respond to a single-bladder BCD failure by the two methods listed below. (Students using gear configurations that prevent accomplishment of these two skills will be required to wear a redundant BCD. Students who already have a redundant BCD or dry suit may use one of these alternates after attempting perform the methods without the use of the alternative.)
  - a. Completely deflate BCD and swim while maintaining buoyancy control for at least two minutes.
  - b. Completely deflate BCD, ascend safely to the surface, and remain afloat for at least 3 minutes.

# NOTE: If at any time the student starts to over-exert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.

11. In confined water, have a student lose buoyancy by deflation of the BCD and then attempt to utilize a lift bag or other secondary buoyant device as a BCD.

# NOTE: This skill is to demonstrate how effective these devices are and to reinforce that even if not suitable for a redundant BCD they still provide an option for self rescue in an emergency situation.

- 12. Following a means of reference (pool wall, guide line, ship railing, etc.) with eyes closed, remove stage cylinder and swim a distance of at least 15 feet (4.5 meters). Reverse direction, return to stage cylinder and replace it on correct side.
- 13. Two divers approximately 60 feet (18 meters) apart, with blacked-out masks or eyes closed, and while simulating an out of air situation, locate each other (using side of pool, rail on wreck, guide line, etc. for orientation) and begin gas sharing via long hose.
- 14. Prior to dives, students must use IANTD Gas Management Charts to match gas turn points.
- 15. Open and close tank valves at least once on all dives.
- 16. At least once on each dive, Instructor is to signal to student(s) that one of their regulators is malfunctioning and the student is to take the corrective action (Open Circuit only).
- 17. Perform gas sharing in one form or another on at least 3 of the air dives. It is recommended that the Instructor do this at times when it surprises at least one of the divers, and at a point when there is a reasonable distance between the divers. Determine RMV and demonstrate ability to calculate and perform gas matching. (Open Circuit only)

### Normoxic Trimix Closed Circuit Rebreather Diver

#### A. Purpose

- This Program is designed to train divers in the safer use of the CCR for dives using normoxic helium-based gas mixtures for diluent and stages. It is also especially useful to train divers who wish to dive up to 200 fsw (60 msw), but do not wish to breathe air diluent below 90 fsw (27 msw) on CCR.
- 10. The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 200 fsw (60 msw).

#### B. Prerequisite

- 1. Must be qualified as an IANTD CCR Diver. Divers who are qualified as an OC Trimix Diver, see note below under the Program Content section (Section C.).
- 2. Must provide proof of a minimum of 100 logged dives, of which at least 30 were deeper than 90 fsw (27 msw) or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. Must have 20 dives and 25 hours on the CCR being used.
- 4. Divers certified as OC Normoxic may take this course combined with the CCR diver course with qualification given once the hours/dives are logged
- 5. Must be a minimum of 18 years of age.

#### C. Program Content

- 1. Complete all academic portions and all lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD CCR Normoxic Trimix Diver Student Kit.
- 2. Complete a written exam specific to Normoxic Trimix Diving on CCR with a minimum score of 80%.
- 3. This Program must also include a minimum of two dives in OW (or overhead environments if the diver is already qualified or if taking this Program in conjunction with a cave or wreck course) on Trimix using one gas switch. These dives may be performed at depths between 130 fsw (39 msw) and 200 fsw (60 msw). All dives must follow or use as backups to a dive computer the IANTD Tables using one gas switch. Dive computers with gas switching capability are recommended. Dives may be made on custom software generated tables provided it is a Program approved by IANTD. This Program must include a confined water session prior to a minimum 300 minutes of in water training time of 4 dives using the CCR with an END that does not exceed 120 fsw (36 msw) in the mixture for diluent. Two dives may use EANx or Air diluent mixtures for dives more shallow than 90 fsw (27 msw).
  - a. Divers already qualified as Normoxic Trimix Divers may take the course combined with CCR Diver but must complete all lectures and dives.
- 4. Three of the dives must be deeper than 130 fsw (39 msw) and at least one dive must be to 170 fsw (51 msw). No dives may exceed a depth of 200 fsw (60 msw).
- 5. Divers qualified as OC Trimix who successfully complete the Normoxic CCR program are eligible for the CCR Trimix certification at the instructors' discretion, based on performance.

#### D. Equipment Requirements

- 1. IANTD CCR Normoxic Trimix Diver Student Kit.
- 2. Must own or have unlimited access to a CCR.

#### E. Program Limits

- 1. There may be no more than 4 students per Instructor. This ratio may be increased by 2 students (for a maximum of 6 students) with an assisting IANTD Trimix Diver Supervisor. If the course is conducted in conjunction with a Cave or Wreck Programs, the limits for those Programs will prevail.
- 2. No dives may be conducted to depths greater than 200 fsw (60 msw).
- 3. Computer controlled oxygen partial pressure may not exceed 1.3 during the working portion of the dives, nor exceed 1.4 ATA during the decompression portion of the dives.
- 4. Normoxic Trimix dives must be conducted using an on board diluent mixture containing not more than 1.1 PO<sub>2</sub> for diluent
- 5. Surface oxygen must be available for use in the event of Decompression Illness (DCI).
- 6. All dives must be performed as a single dive team.
- 7. All appropriate safety or required decompression stops must be performed.
- 8. Only one decompression (stage) cylinder may be used in this course.

 Each team must carry stages or adequate bailout gas or bailout rebreathers to get 1½ divers to the surface on CCR. Individual team members should carry no more than one bailout cylinder and its PO<sub>2</sub> may not exceed 1.6 at the MOD and may not have an END greater than 120 fsw (36 msw).

### F. Water Skills Development

- 1. A confined water session demonstrating <u>all</u> skills must be completed to the instructor's satisfaction prior to conducting any open water dives.
- 2. Full manual operation dive.
- 3. Simulate solenoid failures.
- 4. Become proficient in the following propulsion techniques: modified flutter, modified frog, modified dolphin and standard shuffle kicks.
- 5. Simulate manual gas control with valve shutdowns.
- 6. Deploy lift bag in less than 1½ minute, and repeat at least 3 times during the Program.
- 7. Swim a distance of at least 75 feet (23 meters) without wearing a mask.
- 8. Practice removing and replacing a stage cylinder, both at rest and while swimming. Have divers simulate bailout and have reached 50% of bailout gas switch cylinders -repeat his drill until there is a minimum of change in swim pace and body posture
- 9. Have 2 divers swim side-by-side, in full equipment, simulating an out-of-gas situation (without breathing, and exhaling slowly), for a distance of 60 feet (18 meters), then stop and begin breathing with one diver handing-off the second stage hose to the other diver. Then exchange stage cylinders. Divers should remain a rest for 3 breaths, then swim at an average pace for at least 10 minutes while breathing from the stage cylinder. This drill should be done with the diver breathing from the stage cylinder.
- 10. Divers must if the CCR is configured to allow it plug their bailout cylinders into the counterlungs on both inhalation and exhalation sides
- 11. Divers should if the CCR is compatible plug their bailout stages into buddies units and allow buddy to get gas from them
- 12. Remove and replace equipment on bottom and on surface at least once
- 13. Bailout from a depth greater than 160 fsw (48 msw) and ascent for 33 fsw (10 msw) and check how much gas was used and time- post dive use this value to determine bailout needs at depth
- 14. Perform SCR bailout for at least 10 minutes on a dive
- 15. Verify ability to maintain PO<sub>2</sub> with minimum loop volume
- 16. Remove the harness and cylinders from a simulated unconsciousness diver in less than 2 minutes. (Students who exceed the time limit on this skill must have a quick-release added to their harness).
- 17. Complete all Water skills listed under the CCR diver Standards.

#### The skills below are additional required skills for divers not previously qualified as Normoxic Trimix Divers

- 18. Divers using a quick-release on their harness or backpack must, in confined water, swim the system while the instructor disconnects the quick-release to simulate a failure. The student is to swim the system demonstrating control of buoyancy and body positioning with the quick disconnect released for sufficient duration to satisfy the instructor that the student may manage this type of failure.
- 19. Demonstrate an ability to respond to a single-bladder BCD failure by the two methods listed below. (Students using gear configurations that prevent accomplishment of these two skills will be required to wear a redundant BCD. Students who already have a redundant BCD or dry suit may use one of these alternates after attempting perform the methods without the use of the alternative).
  - a. Completely deflate BCD and swim while maintaining buoyancy control for at least two minutes.
  - b. Completely deflate BCD, ascend safely to the surface, and remain afloat for at least 3 minutes.
  - c. Use counterlungs to assist in buoyancy control.

NOTE: If at any time the student starts to over-exert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.

20. In confined water, have a student lose buoyancy by deflation of the BCD and then attempt to utilize a lift bag or other secondary buoyant device as a BCD.

NOTE: This skill is to demonstrate how effective these devices are and to reinforce that even if not suitable for a redundant BCD they still provide an option for self rescue in an emergency situation.

21. Following a means of reference (pool wall, guide line, ship railing, etc.) with eyes closed, remove stage cylinder and swim a distance of at least 15 feet (4.5 meters). Reverse direction, return to stage cylinder and replace it on correct side.

- 22. Two divers approximately 60 feet (18 meters) apart, with blacked-out masks or eyes closed, and while simulating an out of air situation, locate each other (using side of pool, rail on wreck, guide line, etc. for orientation) and begin gas sharing with the diver breathing from the stage cylinder.
- 23. Prior to dives, students must use match gas turn points based on oxygen metabolism.
- 24. At least two times on each dive, Instructor is to signal to student(s) that they have an emergency.

## Trimix Diver

### A. Purpose

- 1. This Program is designed for those individuals already involved in deep diving activities, but is *not* intended to be used as an enticement to divers who are content to remain in Sport or EANx diving limits.
- 2. Trimix affords a safer means for deep-water exploration for divers who dive deep or perform with a clear head at depth. The IANTD Trimix Diver Program requires the diver to be self-sufficient/reliant.
- 3. The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 333 fsw (100 msw).

### B. Prerequisites

- 1. Must be qualified as an IANTD Technical Diver or Technical Cave Diver or Technical Wreck Diver or Normoxic Trimix Diver or equivalent.
- Must provide proof of a minimum of 200 logged dives, of which at least 25 were to depths between 140 fsw (42 msw) and 200 fsw (60 msw) or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. Must be a minimum of 18 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Trimix Diver Student Kit.
- 2. Perform two skills-training dives following completion of the confined water session(s) add in and a total of 4 dives will be conducted in this course with a minimum in which two stage cylinders are used, to a depth between 60 fsw (18 msw) and 200 fsw (60 msw). These dives may be on air, EANx or Trimix provided the depths are acceptable for the gas used, and two gas switches are practiced during ascent. Divers may not do dives on air deeper than 130 fsw (39 msw).
- 3. All depths must be worked up to incrementally with no increase greater than 40 fsw (12 msw) from one dive to the next (the first dive in the course on mix must not be more than 33 fsw (10 msw) deeper than the student's previous experience in deep diving). One dive must be to at least 200 fsw (60 msw) or deeper, and the deepest training depth may not exceed 333 fsw (100 msw).
- 4. All dives must include two gas switches.
- 5. Divers entering the Program on equivalent experience must complete the above requirements plus make two additional training (for a total of six training dives) dives using two stage cylinders. These two additional dives may be on air, EANx or Trimix at the instructor's discretion.
- 6. If the course is a combined course (e.g., Technical Diver and Trimix Diver), the Program must include a minimum of 420 minutes of open-water run time completed within at least 7 dives.
- 7. To complete the course within the minimum specified dives. With 2 or more additional dives the student may graduate from the course with an overall average score of 6 points.

### D. Equipment Requirements

- 1. IANTD Trimix Diver Student Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Technical Diver Programs overview.

### E. Program Limits

- 1. There may be no more than 4 students per Instructor on any dives, and no more than 3 students per Instructor on dives conducted to depths greater than 220 fsw (66 msw). The ratio for deeper dives may be increased to 4 students with an assisting IANTD Technical Instructor or Normoxic Trimix Instructor who is also a qualified IANTD Trimix Diver or a Trimix supervisor.
- 2. Dives up to 300 fsw (90 msw) may be conducted during the course once 6 dives more shallow than 140 fsw (42 msw) and 2 dives no deeper than 200 fsw (60 msw) have been made, provided the student has completed 20 Trimix dives prior to the course.
- 3. No dives may be conducted to depths greater than 333 fsw (100 msw). Trimix dives may not be made to a depth less than 160 fsw (48 msw).
- 4. Equivalent Narcosis Depth (END) may not exceed 130 fsw (39 msw).
- 5. Surface oxygen must be available for use in the event of Decompression Illness (DCI).
- 6. All dives must be performed as a single dive team.
- 7. All appropriate safety or required decompression stops must be performed.

8. No dives made me made with a PO<sub>2</sub> greater than 1.6 for decompression and 1.4 for bottom mix.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Two divers approximately 60 feet (18 meters) apart, locate each other while simulating an out of air situation (without breathing, and exhaling slowly) and begin gas sharing via long hose. After taking 3 breaths at rest, continue swimming at a normal rate while sharing gas for at least 2 minutes.
- 3. Simulate gas failure with valve shutdowns for both primary and secondary regulators. The entire drill must be completed in less than 1 minute. This drill should be completed at least once each dive, with a buddy acting as a safety diver, then switch roles. Upon completion of skill, verify both primary tanks are turned back on.
- 4. While swimming, demonstrate efficient switch to stage cylinder regulators.
- 5. Following a means of reference (pool wall, guide line, ship railing, etc.) with eyes closed, remove stage cylinders and swim a distance of at least 15 feet (4.6 meters). Reverse direction, return to stage cylinders and replace them on correct sides, identifying each cylinder by feel.
- 6. Prior to dives, students must use IANTD Gas Management Charts to match gas turn points.
- 7. Remove and replace stage cylinders both at rest and while swimming.
- 8. Deploy and use a lift bag or up line at least once in OW.
- 9. Remove and replace equipment during confined water training (doubles and stage[s]), first on the surface, then on the bottom, in less than 2 minutes.
- 10. Simulate the rescue of a diver. Tow the diver on the surface for a distance of at least 40 feet (12 meters) while simulating mouth-to-mouth resuscitation. Go through EMS procedures and remove equipment from victim in the water (equipment removal must be accomplished in less than 1½ minutes, students in continuous webbing who cannot have their equipment removed within the time limit must add a quick release to their harness). Repeat until proficient.

### Trimix Closed Circuit Rebreather Diver

### A. Purpose

- 1. This Program is designed to train divers in the safer use and technology of Rebreathers for deep diving to depths in excess of 200 fsw (60 msw).
- 2. The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 333 fsw (100 msw).

### B. Prerequisites

- 1. Must be qualified as an IANTD Normoxic CCR Diver, or if entering the Program based on equivalent experience, must be qualified as either Normoxic Trimix Diver or Trimix Diver (OC) or must be taking the Normoxic CCR Diver and Trimix Diver course on an approved Rebreather for mixed gas diving, with all dives other than confined water made on Trimix or Heliox. Note all CCR Trimix Divers must have completed the Normoxic CCR lectures and skills.
- 2. Must provide proof of a minimum of 200 logged dives or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. 50 hours of dive time is required on the specific Rebreather for which the diver is being trained.
- 4. Must be a minimum of 18 years of age.

### D. Program Content

- 1. Lecture material adequate to cover the needs of the specific Rebreather and Trimix diving knowledge. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Trimix CCR Diver Student Kit. A confined water session must be completed prior to a minimum of 320 minutes in water training time and a minimum of 4 dives.
- 2. For those who are already OC Trimix Divers this Program must include a confined water session and a minimum of 150 minutes of in water training time, using Trimix or Heliox, completed within at least 2 open-water or overhead-environment dives.
- 3. For divers not previously qualified as OC Trimix Divers, but who are Normoxic Trimix qualified a confined water session and 240 minutes of run time to be completed within 3 dives. If the Program includes the combination of Normoxic Trimix Diver and Trimix Diver, all dives must be performed on the Rebreather for a minimum of 480 minutes of in water training time completed within at least 7 open-water or overhead-environment dives. One dive must be to at least 200 fsw (60 msw) or deeper. No dives may be conducted deeper than 333 fsw (100 msw).

### E. Equipment Requirements

- 1. IANTD CCR Trimix Diver Student Kit.
- 2. Must own or have direct access to the specific Rebreather model being taught.

### F. Program Limits

- 1. There may be no more than 4 students per Instructor.
- 2. All dives must be conducted to depths between 130 fsw (39 msw) and 333 fsw (100 msw).
- 3. Inspired oxygen partial pressure may not exceed 1.30 PO<sub>2</sub> on a dive or 1.4 PO<sub>2</sub> on decompression.
- 4. All dives must be completed within the IANTD oxygen CNS% limits.
- 5. All appropriate safety or required decompression stops must be performed.
- 6. Each team must carry stages or adequate bailout gas or bailout rebreathers to get 1 ½ divers to the surface on CCR.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Pack absorbent canister.
- 3. Perform leak test.
- 4. Perform loss of gas drill.
- 5. Simulate bailout procedures. (SCR, OC and Buddy OC).
- 6. Ascend using bailout for at least 30 fsw (9 msw) from a depth of at least 200 fsw (60 msw). Record time lapsed and gas used.
- 7. Perform SCR bailout for minimum of 10 minutes on at least one dive.
- 8. Exchange of stage cylinders or long hose to a dive buddy who has used 50% of their bailout
- 9. Demonstrate proficiency in all skills on the CCR diver skills tables as well as all skills in the CCR Normoxic Trimix diver course.
- 10. React to simulation of oxygen by pass due to faulty manual addition valves or switching assemblies
- 11. Practice system monitoring.

- 12. Swim 60 feet (18 meters) without breathing, and exhaling slowly, and then perform bailout procedure
- 13. Deploy and use a lift bag or up line at least once in OW.
- 14. While swimming, demonstrate efficient switch to stage cylinder regulators.
- 15. Following a means of reference (pool wall, guide line, ship railing, etc.) with eyes closed, remove stage cylinders and swim a distance of at least 15 feet (4.5 meters). Reverse direction, return to stage cylinders and replace them on correct sides, identifying each cylinder by feel.
- 16. Simulate the rescue of a diver. Tow the diver on the surface for a distance of at least 40 feet (12 meters) while simulating mouth-to-mouth resuscitation. Go through EMS procedures and remove equipment from victim in the water (equipment removal must be accomplished in less than 1½ minutes, students in continuous webbing who cannot have their equipment removed within the time limit must add a quick release to their harness). Repeat until proficient.

### **Expedition Trimix Diver**

### A. Purpose

- 1. This program is designed to train OC divers already involved in deep diving activities to more safely conduct exploration dives requiring extended decompression profiles and helium-based gas mixture. This program is not intended to be used as an enticement to divers who are content to remain in normal Sport or EANx diving limits.
- 2. Trimix affords a safer means for deep-water exploration for divers who dive deep or perform with a clear head at depth. The IANTD Trimix Diver Program requires the diver to be self-sufficient/reliant.
- 3. The knowledge and skills taught in this program are more than adequate to qualify divers to perform Trimix Dives outside of training up to 400 fsw (120 msw).

### B. Prerequisites

- 1. Must be qualified as an IANTD Trimix Diver or equivalent.
- 2. Must have at least 100 Trimix dives or sufficient experience conducting technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. Must be a minimum of 21 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Expedition Trimix Diver Student Kit (TBA).
- 2. Complete a written exam specific to Expedition Trimix with a minimum score of 80%.
- 3. This program must include a confined water session prior to open water. At least one dive working on new skills must be made at depths between 150 fsw (45 msw) and 200 fsw (60 msw) followed by a minimum of 3 dives in depths between 220 fsw (66 msw) and 400 fsw (120 msw).
- 4. This Program must include a minimum of 300 minutes of in water time, using Trimix or Heliox.
- 5. One dive must be to at least 333 fsw (100 msw) or deeper. No dives to exceed 400 fsw (120 msw).

### D. Equipment Requirements

- 1. IANTD Expedition Trimix Diver Student Kit (TBA).
- 2. Must own or have direct access to Trimix OC equipment including at least 3 decompression stages.

### E. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. All dives must be conducted to depths between 30 fsw (9 msw) and 400 fsw (120 msw).
- 3. Bottom mix cannot exceed a PO<sub>2</sub> of 1.4 ATA and deco of 1.6 ATA.
- 4. All dives must be completed within the IANTD oxygen CNS% limits.
- 5. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Practice use of 3 or more stage cylinders.
- 3. Swim 75 feet (25 meters) without breathing, while exhaling slowly, and then perform gas sharing procedure.
- 4. Practice switching diver to diver, and handling of, stage cylinders.
- 5. Perform one gas sharing drill at 333 fsw (100 msw) and remain on diluent bailout stage for at least 5 minutes. Compute gas used and distance traveled. Upon surfacing determine how much gas would have been needed on an actual dive to reach the surface safely. Each team must carry stages or adequate bailout gas or bailout rebreathers to get 1 ½ divers to the surface.
- 6. While swimming, demonstrate efficient switch between multiple stage cylinder regulators.
- 7. Remove and replace stage cylinders both at rest and while swimming.
- 8. Deploy and use a lift bag while hovering in mid-water at least once in OW.

### Expedition CCR Trimix Diver

### A. Purpose

- 1. This program is designed to train CCR divers already involved in deep diving activities to more safely conduct exploration dives requiring extended decompression profiles and helium-based gas mixture. This program is not intended to be used as an enticement to divers who are content to remain in normal Trimix diving limits.
- 2. The knowledge and skills taught in this program are more than adequate to qualify divers to perform CCR Trimix Dives outside of training up to 400 fsw (120 msw).

### **B.** Prerequisites

- 1. Must be qualified as an IANTD CCR Trimix Diver or equivalent.
- 2. Must have at least 100 Trimix dives including at least 50 CCR Trimix Dives or sufficient experience conducting technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training
- 3. Must be a minimum of 21 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD CCR Expedition Trimix Diver Student Kit (TBA).
- 2. Complete a written exam specific to Expedition CCR Trimix with a minimum score of 80%.
- 3. This program must include a confined water session prior to open water. At least one dive working on new skills must be made at depths between 150 fsw (45 msw) and 200 fsw (60 msw) followed by a minimum of 3 dives in depths between 220 fsw (66 msw) and 400 fsw (120 msw)
- 4. This Program must include a minimum of 300 minutes of in water time, using Trimix or Heliox.
- 5. One dive must be to at least 333 fsw (100 msw).

### D. Equipment Requirements

- 1. IANTD CCR Expedition Trimix Diver Student Kit (TBA).
- 2. Trimix CCR equipment including at least 3 bailout stages or a bailout rebreather.

### E. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. All dives must be conducted to depths between 150 fsw (45 msw) and 400 fsw (120 msw).
- 3. Must not exceed a PO2 of 1.3 ATA on the dive and deco of 1.4 ATA
- 4. All dives must be completed within the IANTD oxygen CNS% limits.
- 5. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. Practice use of 3 or more stage cylinders.
- 3. Swim 75 feet (25 meters) without breathing, while exhaling slowly, and then perform bailout procedure.
- 4. Practice switching stages diver to diver.
- 5. Perform bailout drill at 333 fsw (100 msw) and remain on diluent bailout stage for at least 3 minutes. Compute gas used and distance traveled. Upon surfacing determine how much gas would have been needed on an actual dive to reach the surface safely. Each team must carry stages or adequate bailout gas or bailout rebreathers to get 1 ½ divers to the surface
- 6. While swimming, demonstrate efficient switch between multiple stage cylinder regulators (O/C bailout or C/C gas block) or between bailout rebreather systems.
- 7. Remove and replace stage cylinders both at rest and while swimming.
- 8. Practice switching of bailout stages between buddies while maintaining a normal swim pace.
- 9. Deploy and use a lift bag while hovering in mid-water at least once in OW.
- 10. Perform all procedures on the CCR diver skill sheets.

### Trimix Gas Blender

### A. Purpose

1. This Program is designed to train competent personnel in the safe handling of oxygen and the preparation of Trimix and Heliox.

### B. Prerequisites

- 1. Must be qualified as an IANTD EANx Gas Blender and have a need to become a Trimix Blender (such as working for a training or full service facility) If not affiliated with a facility must be a qualified Trimix Diver and located in a remote area.
- 2. Must be recommended by an IANTD Instructor or Facility.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Gas Blender Student Kit.
- 2. This Program must include a minimum of 2 hours of hands-on experience preparing mixtures with helium.
- 3. A written test must be passed with a minimum score of 80%, and must demonstrate mixing capability.

### D. Equipment Requirements

- 1. IANTD Gas Blender Student Kit.
- 2. All equipment used in this Program must be compatible with the Trimix mixtures being prepared and the method in which the Trimix is being blended.
- 3. Approved mixing station.
- 4. Oxygen analyzer.
- 5. Recommended Helium Analyzer.

### E. Program Limits

1. There are no specific limits for this Program.

### IAND, INC. / IANTD CAVE AND WRECK DIVER TECHNICAL PROGRAMS

### A. Purpose

1. These Programs are designed to provide quality instruction of IANTD Technical Diving qualification levels.

### **B.** Prerequisites

- 1. In all IAND, Inc./IANTD Technical Diver Programs, lectures and confined water skills completed in another IANTD Technical Program may be credited where applicable toward the new level of qualification.
- 2. Training dives from other IANTD or equivalent Technical Diver Programs may be credited at a rate of 1 dive credit per every 4 logged training dives, with a maximum of 25 minutes credit per dive.
- 3. Diving experience at a given level of qualification may be credited at 1 dive credit per every 25 logged dives at the level of training the student is engaged in.
- 4. Even with maximum time or dives credited, the additional minimums, as referenced in each individual Program, must be completed.
- 5. Crediting of dives / bottom time and lectures is solely at the discretion of the Instructor.
- 6. Divers coming into IANTD Programs from other EANx and Technical Diver training agencies (NACD, NSS/CDS, CDAA, etc. or equivalent.) must demonstrate proof of equivalent skill and theory training or do a crossover equivalency Program.

### C. Text / Media

All IANTD courses require Student Kits to certify divers. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD diver program name" followed by the words Student Kit.

### D. Program Limits

- 1. IANTD Programs are unique in that they require the student to complete a specified amount of bottom time prior to becoming qualified at a given level. Specific bottom time requirements are given in each individual Program.
- 2. Recognizing that there may be unusual circumstances or that some individuals excel beyond the level of others, Instructors may waive up to 10 percent of the stated bottom time in any IANTD Program.
- 3. On all IANTD Cave and Wreck Diver Programs, the maximum Student to Instructor ratios permitted are based on entering the water with visibility of 30 feet (9 meters) or more. If the visibility upon entering the water is less than 30 feet (9 meters), the following modifications to Student to Instructor ratios apply:
  - a. If the visibility is between 20 feet (6 meters) and 30 feet (9 meters) the maximum Student to Instructor ratio is 2 to 1.
  - b. If the visibility is between 12 feet (3.6 meters) and 20 feet (6 meters) the maximum Student to Instructor ratio is 1 to 1.
  - c. If the visibility is less than 12 feet (3.6 meters) then cave and wreck training dives may not be conducted.
- 4. On all dives the IANTD dive tables must be used as either the primary decompression management or as a backup to a dive computer or custom software Program or other tables approved by the IANTD BOD.
- 5. A continuous guideline that allows for a safe exit at the entrance will be in place at all times during training in any overhead environment.

NOTE: In order for a cave instructor to teach Advanced Cave courses, they must be specifically rated as an instructor for each. Being a Technical Cave Instructor does not (in and of itself) qualify the Instructor to teach the Advanced Cave programs.

### Cave Diver and Technical Cave Diver

### A. Purpose

1. This Program is designed to train divers in safe cave diving and the technical utilization of EANx for cave exploration, and the use of EANx and oxygen for decompression.

### B. Prerequisites

- 1. If entering through modular route, must be qualified as Introductory Cave Diver with proof of a minimum of 50 logged dives. If not qualified as introductory cave diver must have proof of 100 dives or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 2. If taking the course on a Rebreather must have 25 dives with 35 hours of dive time on the Rebreather.
- 3. To enter Technical Cave (Technical Diver) in addition to #1, student must be qualified as an IANTD EANx or Advanced EANx Diver, or equivalent experience or training as determined by the instructor
- 4. Must be a minimum of 18 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Cave or Technical Cave Diver Student Kit.
- 2. Divers already qualified as an IANTD Technical Diver need only complete the cave portion of the Program to be qualified as Technical Cave Diver. Divers taking an Air Cave Program do not need EANx training.
- 3. This Program must include a minimum of 480 minutes of in cave bottom time completed and their must be a minimum of 12 cave dives performed even f the time requirements are completed earlier
- 4. For students already qualified as Introductory Cave Diver or IANTD Wreck Diver, this Program must include a minimum of 400 minutes of cave bottom time within a minimum of 8 cave dives.

# NOTE: The combined cave bottom time from Introductory Cave Diver and Cave Diver Programs must total at least 480 minutes, even if the bottom time is met first. A minimum of 8 cave dives using double cylinders must be logged. Instructors are not required to give credit for experience or other qualification levels and should do so only if the skill level of the diver meets the Instructor's satisfaction.

- 4. It is recommended that Instructors allow crediting of dive time only for extremely competent divers.
- 5. Environmental conditions allowing, a minimum of three different caves must be included in a Cave Program. In event of flooding and other special circumstances, the three-cave requirement may be waived if approved by IAND, Inc./IANTD World Headquarters or the local Licensee of the Region the Program is conducted in.
- 6. Instructors who have been authorized to teach Stage Diving have the option of performing Staged Cave Dives if they are comfortable with the abilities of the diver. All divers will be taught with a stage cylinder of bottom mix or with a stage cylinder of decompression mix if the Instructor elects not to incorporate stage dives into the Program.
- 7. To complete the course within the minimum specified dives, students must have an average of 8 out of 10 points on the watermanship evaluations. With 2 or more additional dives, the student may graduate from the course with an overall average score of 6 points.
- 8. Land drills:
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps.

### E. Equipment Requirements

- 1. IANTD Cave Diver Student Kit **OR** IANTD Technical Cave Diver Student Kit.
- 2. All students must be taught the concept of gas matching.
- 3. All bottom mix tanks must be equipped with dual-outlet manifold valves. Independent cylinders may be used when configured as side mounts or back mounts for sump diving only. If a Rebreather is used, it must be equipped with adequate bailout, including out-of-air emergency drills.
- 4. A stage decompression cylinder containing oxygen or an EAN mixture with at least 50% oxygen, and appropriately labeled. (Technical Cave Diver Program only).
- 5. An optional EANx stage cylinder containing a minimum of 50 cubic feet (1,400 free liters) of gas may be used for overhead penetration at the Instructor's discretion.
- 6. Two (2) Primary regulators must provide ample gas flow. One second-stage hose must be at least 5 feet (1.5 meters) in length; longer hoses are recommended.

- 7. Each gas source must have its own dedicated submersible pressure gauge.
- 8. A primary BCD is required. Back flotation is recommended. A backup BCD is required if the student cannot maintain buoyancy in the event of a bladder failure. If a dry suit is used, it may serve as the backup BCD.
- 9. Dive tables, depth gauge and dive timer or a dive computer.
- 10. Two reels: one Primary (cave) guide reel and one (cavern or gap) safety reel.
- 11. One Primary light and two secondary lights (flashlight type).
- 12. Three (3) line arrows.
- 13. A backup cutting tool is recommended.

### F. Program Limits

- 1. There may be no more than 3 students per Instructor on any dives and no more than 2 students per Instructor on dives conducted to depths greater than 130 fsw (39 msw).
- In most cases, no dives may be conducted to depths greater than 130 fsw (39 msw). When conditions warrant it, Cave Diver Programs may be conducted to a maximum depth of 160 fsw (48 msw), provided the students are qualified as Technical Divers or have equivalent experience of at least 25 dives to depths between 140 fsw (42 msw) and 160 fsw (48 msw).
- 3. When appropriate conditions are available (i.e., depths between 130 fsw [39 msw] and 200 fsw [60 msw]), the Normoxic Trimix Program may be taught in combination with the Cave course, provided all cave dives deeper than 130 fsw (39 msw) are conducted using mixtures specified in the Normoxic Trimix Program. Qualified Normoxic Trimix Divers may be trained in caves at depths between 100 fsw (30 msw) and 200 fsw (60 msw). Qualified Trimix Divers may be trained in caves on Trimix at depths between 130 fsw (39 msw) and 300 fsw / 91 msw provided there are no alternative locations.
- 4. Divers who were previously certified as Normoxic Trimix and have at least 10 Normoxic Trimix dives may make cave training dives up to 200 fsw (60 msw) once 6 cave dives OC or CCR more shallow than 140 fsw (42 msw) have been completed plus two dives between 140 fsw (42 msw) and 170 fsw (51 msw).
- 5. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.60 ATA during the decompression portion of the dives.
- 6. For the Technical Cave Diver Program, a minimum of 6 dives must be completed using EANx with at least 23% oxygen.
- 7. Decompression Gas mixtures:
  - a. On non-Technical Cave Program, or with divers not certified in EANx, students may decompress using EANx mixtures with between 40 and 100% oxygen to a maximum depth of 15 fsw (4.5 msw), provided the concept of oxygen decompression is taught. Technical divers or students enrolled in the Technical Cave Program may breathe any EANx mixture or oxygen during decompression and use accelerated decompression schedules accordingly.
  - b. On non-Technical cave dives or with students not qualified in EANx, the student may breathe EANx mixtures with oxygen concentrations ranging from 40% to 100% at depths not to exceed 15 fsw (4.5 msw), provided the concept of oxygen decompression is taught.
- 8. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
- 9. All appropriate safety or required decompression stops must be performed.

### F. Water Skills Development

- 1. A confined water session must be completed before conducting any cave dives.
- 2. Swim with equipment to be used in Program until comfortable with it.
- 3. Divers using a quick-release on their harness or backpack must, in confined water, swim the system while the instructor disconnects the quick-release to simulate a failure. The student is to swim the system demonstrating control of buoyancy and body positioning with the quick-release disconnected for sufficient duration to satisfy the instructor that the student is capable of managing this type failure.
- 4. Demonstrate an ability to respond to a single-bladder BCD failure by the two methods listed below. (Students using gear configurations that prevent accomplishment of these two skills will be required to wear a redundant BCD. Students who already have a redundant BCD or dry suit may use one of these alternates after attempting perform the methods without the use of the alternative.)
  - a. Completely deflate BCD and swim while maintaining buoyancy control for at least two minutes.
  - b. Completely deflate BCD, ascend safely to the surface, and remain afloat for at least three minutes.

### NOTE: If at any time the student starts to over-exert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.

- 5. Perform a pre-dive "S" (safety) drill prior to starting dive. Check all equipment for proper function. Check equipment of each dive buddy. Ascertain each team member is familiar with use and location of dive system components.
- 6. Perform an in-water "S" (safety) drill.
  - a. Leak-check each team member's equipment.

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- b. Breathe underwater from both / all regulators to ensure proper functioning.
- c. Perform light checks.
- d. Perform valve shutdowns combined with regulator switches, including shutting both regulators.
- e. If isolator valves are used, these are also to be closed and then re-opened.
- f. Buddies should check that all valves are back in proper position at end of drill.
- g. On a first dive with a new partner, perform a gas sharing drill.
- 7. Communicate the gas turn around point in psig, and if the divers are wearing different cylinder sizes, match gas per the SRF tables or per dissimilar tank volumes.
- 8. Confined or OW: Swim 60 feet (18 meters) while simulating an out-of-gas situation, then commence gas sharing via the long hose, remain at rest for three breaths, and swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute (static water swim rate).
- 9. Confined or OW: Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet. Upon meeting gas sharing via the long hose combined with touch contact is to be performed until the line circuit is completed.
- 10. Develop proficiency in a variety of propulsion techniques including cave frog kick, modified flutter kick, shuffle kick, and pull and glide technique.
- 11. Demonstrate proficiency in use of reels and lines.
- 12. During a cave dive, at a point after turning the dive, perform a gas sharing drill exiting the cave for a reasonable distance / time. Exercise is to commence with Instructor at some point randomly selecting the out-of-gas diver, who must then go to the buddy and share gas. The out-of-gas diver is to keep the regulator in his or her mouth (leaving the airway open) but not breathe from it if at all possible. This drill is to be repeated on different dives until all students have been both a donor and a recipient of gas.
- 13. On a cave dive, exit cave with eyes closed or lights off maintaining contact with buddy and dive line using touch communications.
- 14. Repeat previous drill, except at some point the Instructor will choose one of the divers to simulate being out of gas. The out-ofgas diver must communicate the problem to a buddy via touch contact, and gas sharing is to be performed for a reasonable distance. Repeat this skill until all students have been both a donor and recipient of gas.
- 15. Perform lost diver drills.
- 16. Perform lost line drills.
- 17. Demonstrate either on a cave dive or confined water the ability to drop and recover a stage cylinder. This may be the tank used as a decompression tank or an actual penetration stage cylinder.
- 18. Conduct a traverse, gap and circuit dive. If conditions do not allow this possibility then it is to be simulated.
- 19. It is recommended that the student attempt to exit the cave with eyes closed or lights off without the use of a line. Instructor must prevent the student from getting into a silt-out away from the line or any other adverse situation during this drill.
- 20. On at least three dives, the student must simulate a regulator failure and, while swimming, shut off the valve for the primary regulator and switch to the secondary regulator. Upon completion, the diver is to turn on the valve for the primary regulator and switch back to it. A buddy should act as safety diver during this drill.
- 21. On at least three (3) occasions, an out-of-gas drill must be completed without the donor being aware of whether it is a drill or a real out-of-gas situation.

### **Closed Circuit Rebreather Cave Diver**

### A. Purpose

1. This Program is designed to train divers in safe cave diving while using a CCR.

### **B.** Prerequisites

- 1. If entering through modular route, must be qualified as Introductory Cave Diver with proof of a minimum of 50 logged dives.
- 2. If not qualified as introductory cave diver must have proof of 100 dives or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 3. Must have 20 dives and 30 hours of dive time on the CCR to be used in the cave course.
- 4. Must be a minimum of 18 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Cave Diver Student Kit and IANTD CCR Normoxic Trimix Diver Student Kit.
- 2. This Program must include a minimum of 600 minutes of cave bottom time completed within at least 10 cave dives.
- 3. For students already qualified as Introductory Cave Diver or IANTD Advanced /Technical Wreck Diver, this Program must include a minimum of 500 minutes of cave bottom time within a minimum of 8 cave dives.

NOTE: The combined cave bottom time from Introductory Cave Diver and Cave Diver Programs must total at least 600 minutes, even if the bottom time is met first. A minimum of 8 cave dives using CCR must be logged. Instructors are not required to give credit for experience or other qualification levels and should do so only if the skill level of the diver meets the Instructor's satisfaction.

- 4. For those who are already OC Cave Divers this Program must include a confined water session and a minimum of 400 minutes of cave bottom time, completed within at least 4 cave dives. All CCR cave specific skills must be completed.
- 5. Environmental conditions allowing, a minimum of three different caves must be included in a Cave Program. In event of flooding and other special circumstances, the three-cave requirement may be waived if approved by IAND, Inc./IANTD World Headquarters or the local Licensee of the Region the Program is conducted in.
- 6. To complete the course within the minimum specified dives, students must have an average of 8 out of 10 points on the watermanship evaluations. With 2 or more additional dives, the student may graduate from the course with an overall average score of 6 points.
- 7. Land drills:
  - a. Use of lines / line arrows.
  - b. Blacked out drills.
  - c. Lost diver drills / broken lines / line gaps.

### D. Equipment Requirements

- 1. IANTD Cave Diver Student Kit and IANTD CCR Normoxic Trimix Diver Student Kit.
- 2. All students must be taught the concept of gas matching based on oxygen metabolism.
- 3. Bailout adequate to allow 1 ½ divers to exit the cave on OC must be carried by the dive team.
- 4. A stage decompression cylinder containing oxygen is recommended for deco as a back up to the system.
- 5. Bailout stages must be configured to ensure easy hand off to an out of gas diver. A 5 foot 1.5 meter hose is recommended.
- 6. Each gas source must have its own dedicated submersible pressure gauge.
- 7. A primary BCD is required. Back flotation is recommended.
- 8. Dive tables, depth gauge and dive timer or a dive computer.
- 9. Two reels: one Primary (cave) guide reel and one (cavern or gap) safety reel.
- 10. One Primary light with adequate lighting characteristic to meet the accepted standard in cave diving and two secondary lights (flashlight type).
- 11. Three (3) line arrows.
- 12. A backup cutting tool is recommended.

### E. Program Limits

- 1. There may be no more than 3 students per Instructor on any dives and no more than 2 students per Instructor on dives conducted to depths greater than 130 fsw (39 msw).
- 2. In most cases, no dives may be conducted to depths greater than 130 fsw (39 msw). When conditions warrant it, Cave Diver Programs may be conducted to a maximum depth of 200 fsw (60 msw), provided the students are qualified as CCR Normoxic

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Trimix Divers and have equivalent experience of at least 25 CCR dives to depths between 160 fsw (48 msw) and 200 fsw (60 msw).

3. When appropriate conditions are available (i.e., depths between 130 fsw [39 msw] and 200 fsw [60 msw]), the Normoxic Trimix Program may be taught in combination with the Cave course, provided all cave dives deeper than 130 fsw (39 msw) are conducted using mixtures specified in the Normoxic Trimix Program. Qualified Normoxic Trimix Divers may be trained in caves at depths between 100 fsw (30 msw) and 200 fsw (60 msw). Qualified Trimix Divers may be trained in caves on Trimix at depths between 130 fsw (39 msw) and 300 fsw / 91 msw provided there are no alternative locations.

# NOTE: On training dives below 130 fsw (39 msw), written permission must be given by the IANTD Headquarters Training Director.

- 4. Oxygen partial pressure may not exceed 1.30 ATA during the working portion of the dives, nor exceed 1.40 ATA during the decompression portion of the dives.
- 5. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
- 6. All appropriate safety or required decompression stops must be performed.

### F. Water Skills Development

- 1. A confined water session must be completed before conducting any cave dives.
- 2. Swim with equipment to be used in Program until comfortable with it.
- Demonstrate an ability to respond to a single-bladder BCD failure by the two methods listed below. (Students using gear configurations that prevent accomplishment of these two skills will be required to wear a redundant BCD. Students who already have a redundant BCD or dry suit may use one of these alternates after attempting perform the methods without the use of the alternative.)
  - a. Completely deflate BCD and swim while maintaining buoyancy control for at least two minutes.
  - b. Completely deflate BCD, ascend safely to the surface, and remain afloat for at least three minutes.

# NOTE: If at any time the student starts to over-exert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.

- 5. Perform a pre-dive "S" (safety) drill prior to starting dive. Check all equipment for proper function. Check equipment of each dive buddy. Ascertain each team member is familiar with use and location of dive system components.
- 6. Perform an in-water "S" (safety) drill.
  - a. Leak-check each team member's equipment.
  - b. Breathe underwater from the CCR and the bailout stage (s) / all regulators to ensure proper functioning.
  - c. Perform light checks.
  - d. Perform valve shutdowns combined with switches to bailout cylinder, including handing off bailout cylinders at least once each day as part of the S drills.
  - e. Buddies should check that all valves are back in proper position at end of drill.
  - f. On a first dive with a new partner, perform a gas sharing drill by handing off stages.
- 7. Communicate the oxygen gas turn around point.
- 8. Confined or OW: Swim 60 feet (18 meters) while simulating an out-of-gas situation, then switch to bailout cylinder, remain at rest for three breaths, and swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute (static water swim rate).
- 9. Perform all skills other than direct ascents from the CCR Normoxic water skills all CCR emergency skills must be preformed in cave in addition to confined water
- 10. Repeat above skill with divers handing off bailout stage cylinder.
- 11. Confined or OW: Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet. Upon meeting switch to the bailout stage combined with touch contact is to be performed until the line circuit is completed.
- 12. Repeat above with diver handing off bailout cylinder.
- 13. Develop proficiency in a variety of propulsion techniques including cave frog kick, modified flutter kick, shuffle kick, and pull and glide technique.
- 14. Demonstrate proficiency in use of reels and lines.
- 15. During a cave dive, at a point after turning the dive, perform a gas bailout drill exiting the cave for a reasonable distance / time. Exercise is to commence with Instructor at some point randomly selecting the out-of-gas diver, who must then go to his bailout stage cylinder, then at some point have the buddies exchange bailout cylinders simulating that the diver who had bailed out had used 50% of the bailout stage cylinder. This drill is to be repeated on different dives until all students have performed the drill.

- 16. On a cave dive, with eyes closed or lights off simulate blacked out cave conditions maintaining contact with buddy and dive line using touch communications.
- 17. Repeat previous drill, except at some point the Instructor will choose one of the divers to simulate a loop failure. The diver with the failed loop must communicate the problem to a buddy via touch contact, and switch to his/her bailout cylinder. This skill must be performed for a reasonable distance. Repeat this skill until all students have been the diver with the loop failure.
- 18. Perform lost diver drills.
- 19. Perform lost line drills. All emergency drills are to be repeated until the students are proficient and the instructor is satisfied with the performance.
- 20. Demonstrate either on a cave dive or confined water the ability to drop and recover a stage cylinder. This may be the tank used as a decompression tank or an actual penetration stage cylinder.
- 21. Conduct a traverse, gap and circuit dive. If conditions do not allow this possibility then it is to be simulated.
- 22. It is recommended that the student attempt to exit the cave with eyes closed or lights off without the use of a line. Instructor must prevent the student from getting into a silt-out away from the line or any other adverse situation during this drill.
- 23. On at least three dives, the student must simulate a solenoid failure and, take corrective action.
- 24. On at least three (3) occasions, a loop failure drill must be completed and on at least one drill the diver must remain on the bailout stage cylinder for a minimum of 10 minutes. The student is to note the bailout gas used and distance covered. At the end of the dive compute how far under the same conditions could the diver have traveled on the bailout cylinder. Also how much total gas it would take to bailout to the exit point of the cave. Then compute how much oxygen and or other gas would be needed to complete the decompression
- 25. Perform a SCR bailout for at least 10 minutes while on a cave dive.
- 26. Repeat all drills and skills from the CCR Skills tables while on cave dives.

### Advanced Cave - Survey Diver

### A. Purpose

- 1. This Program is designed to provide advanced training in cave diving skills to the experienced, certified, responsible cave divers who wishes to conduct dives while surveying an underwater cave.
- 2. Expose cave divers to conservation concerns and ethical responsibilities that present themselves during collection of survey data.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD Cave Diver or equivalent (NSS/CDS, CDAA, NACD, etc.).
- 2. Must be a minimum of 18 years of age.
- 3. Have a minimum of 25 logged cave dives.

### C. Program Content

- 1. All Lecture and theory material must be completed including but not limited to:
  - d. Motives and risks involved in survey diving.
  - e. Equipment configuration, additional equipment necessary, and streamlining techniques for survey diving.
  - f. Procedures and techniques for collecting survey data for cartography of different grades of cave maps.
  - g. Task loading and dive / gas planning needs for survey diving.
  - h. Gas sharing and additional communication techniques during survey data collection
  - i. Conservation considerations for collecting survey data and minimizing cave impact.
  - j. Reasons for collecting data in the cave environment
  - k. Introduction to techniques used to convert collected survey data into accurate cave map of different grades.
- 2. This Program must include a minimum of 240 minutes of cave bottom time completed within at least 4 cave dives. No crediting of dives is allowed. Even if the minimum bottom time is met, Instructors are encouraged to exceed these minimums. Even if the time and skill requirements are met within fewer than 4 dives, the minimum 4 dives must be made.

### E. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Cave Diver or IANTD EANx Cave Diver Program.
- 2. Suitable survey slate and equipment needed to record data.
- 3. Specialty equipment as specified in the IANTD *Cave Diver Specialty Student Workbook*.

### F. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. No dives may be conducted to depths greater than the qualification of the student.
- 4. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives. All dives must be planned using the best gas in consideration of PO<sub>2</sub>, END, and decompression requirements.
- 5. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
- 6. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
- 7. All appropriate safety or required decompression stops must be performed.

- 1. A land drill must be performed before any diving sessions to practice proper techniques in survey.
- 2. A confined or open water session using survey techniques must be completed before conducting any advanced cave dives.
- 3. Demonstrate proficiency in the following propulsion techniques: modified flutter, modified frog, modified dolphin, and standard shuffle kicks when appropriate during a survey dive.
- 4. Demonstrate the ability to safely and without contact to the cave collect survey data and stay in full communication with team
- 5. Demonstrate perfection of buoyancy, trim and environmental awareness while collecting survey data.
- 6. On at least one occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or real out of gas situation.
- 7. On at least one occasion, exit the cave during a simulated zero visibility situation while avoiding entanglement or loss of the guideline and maintain team touch contact.

### Advanced Cave - Stage / Multi-Stage Diver

### A. Purpose

- 1. This Program is designed to provide advanced training in cave diving skills to the experienced, certified, responsible cave divers who wish to conduct dives that warrant staging and multiple staging techniques.
- 2. Expose cave divers to conservation concerns and ethical responsibilities that present themselves during stage and multiple stage dives, whether it be for decompression, extended penetration, safety, or team planning.

#### **B.** Prerequisites

- 1. Must be qualified as an IANTD Cave Diver or equivalent (NSS/CDS, CDAA, NACD, etc.).
- 2. Must be a minimum of 18 years of age. (Age requirement can be waived for cause with notarized statement).
- 3. Have a minimum of 25 logged cave dives

### C. Program Content

- 1. All Lecture and theory material must be completed including but not limited to
  - a. Motives, risks, and hazards for stage / multistage diving.
  - b. Rigging and transport of stage cylinders in a streamlined manner.
  - c. Procedures and techniques for stage / multistage diving.
  - d. Task loading and planning needs for stage / multistage diving.
  - e. Conservation considerations for stage handling, min. cave impact, considerations for the increased range of impact
  - f. Reasons for stage / multistage diving (safety gas, different gases, penetration distances)
- 2. This Program must include a confined or Open Water session followed by 240 minutes of cave environment bottom time in minimum of 4 dives. No crediting of dives is allowed. Even if the minimum bottom time is met Instructors are encouraged to exceed these minimums. Even if the time and skill requirements are met within fewer than 4 cave dives, the minimum 4 cave dives must be made.

### **D. Equipment Requirements**

- 1. All Equipment Requirements listed in the IANTD Cave Diver or IANTD EANx Cave Diver Program.
- 2. Suitably rigged stage cylinder and regulator with SPG for each cylinder/regulator combo.
- 3. Specialty equipment as specified in the IANTD Cave Diver Specialty Student Workbook.

### E. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. No dives may be conducted to depths greater than the qualification of the student.
- 3. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
- 4. All dives must be planned using the best gas in consideration of PO<sub>2</sub>, END, and Decompression requirements.
- 5. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
- 6. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
- 7. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed before conducting any advanced cave dives
- 2. Demonstrate proficiency in the following propulsion techniques: modified flutter, modified frog, modified dolphin, and standard shuffle kicks while carrying stages / multi-stages.
- 3. Perform at least 2 gas-sharing drills of Instructor's choice (one from back gas or rebreather and one sharing from stage via buddy breathing or handing of stage when appropriate).
- 4. Demonstrate the ability to safely and without contact to the cave drop and recover stage cylinders on all dives (exception when performing circuits or traverses).
- 5. Demonstrate perfection of buoyancy and trim while diving with a stage or multiple stages in the cave environment.
- 6. On at least one occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or real out of gas situation.
- 7. On at least one occasion an out of gas drill must be performed during the exit portion of the dive, with stage or stages, during a simulated zero visibility situation while avoiding entanglement or loss of the guideline and maintain team touch contact.

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- 8. On at least one occasion drop, locate, identify and properly attached multi-stages in simulated zero visibility.
- 9. Perform at least one series of dives involving the following: one a set up dive leave stage in cave, on a following dive, stage to this point (stage) and then use the first stage to extend the penetration from there.
- 10. Demonstrate proficiency in gas matching.

### Advanced Cave - DPV Diver

#### A. Purpose

- 1. This Program is designed to provide advanced training in cave diving skills to the experienced, certified, responsible cave diver who wishes to conduct dives that warrant DPV use and techniques.
- 2. Expose cave divers to conservation concerns and ethical responsibilities that present themselves during DPV uses either for extended penetration, touring, or exploration.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD Cave Diver or equivalent (NSS/CDS, CDAA, NACD, etc.)
- 2. Must be a minimum of 18 years of age.
- 3. Have a minimum of 50 logged cave dives

### C. Program Content

- 1. All Lecture and theory material must be completed including but not limited to
  - a. Motives risks for DPV diving.
  - b. Equipment configuration and streamlining techniques for DPV diving.
  - c. Procedures and techniques for DPV diving.
  - d. Task loading and dive / gas planning needs for DPV diving.
  - e. Gas sharing and towing techniques.
  - f. Conservation considerations for DPV handling, minimizing cave impact, considerations for the increased range of penetration.
  - g. Reasons for DPV use in the cave environment.
  - h. Safe charging, transport and maintenance procedures for DPVs.
- 2 Program must include a minimum of 240 minutes of cave bottom time completed within at least 4 cave dives. No crediting of dives is allowed. Even if the minimum bottom time is met, Instructors are encouraged to exceed these minimums. Even if the time and skill requirements are met within fewer than 4 dives, the minimum 4 dives must be made.

### **D. Equipment Requirements**

- 1. All Equipment Requirements listed in the IANTD Cave Diver or IANTD EANx Cave Diver Program.
- 2. Suitable DPV for dives planned.
- 3. Specialty equipment as specified in the IANTD Cave Diver Specialty Student Workbook.

### E. Program Limits

- 1. There may be no more than 2 students per Instructor.
- 2. No dives may be conducted to depths greater than the qualification of the student.
- 3. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
- 4. All dives must be planned using the best gas in consideration of PO<sub>2</sub>, END, and Decompression requirements.
- 5. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
- 6. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
- 7. All appropriate safety or required decompression stops must be performed.

- 1. A confined or open water session must be completed before conducting any advanced cave dives.
- 2. Demonstrate proficiency in the following propulsion techniques: modified flutter, modified frog, modified dolphin, and standard shuffle kicks while maintaining control of DPV.
- 3. Demonstrate the ability to safely and without contact to the cave drop and recover DPVs on all dives (exception when performing circuits or traverses).
- 4. Demonstrate perfection of buoyancy and trim while diving using a DPV.
- 5. On at least one occasion an out of gas drill must be performed without the donor being aware of whether it is a drill or real out of gas situation.
- 6. On at least one occasion, exit the cave during a simulated zero visibility situation while avoiding entanglement or loss of the guideline and maintain team touch contact.
- 7. While using DPVs perform at least 2 towing methods, at least one of which is while sharing air.
- 8. Simulate a failure of all DPVs in team and swim the units out of the cave.

### Advanced Side Mount (Sump Diver) and No Mount Diver

### A. Purpose

- 1. This Program is designed to familiarize the experienced, certified cave diver with the techniques; equipment and mindset required for side mount / no mount diving activities in an underwater, overhead environment.
- 2. Enable cave divers to proficiently assemble and use side mount / no mount diving equipment.
- 3. Teach cave divers the proper techniques to safely conduct cave diving activities that warrant the use of side mount / no mount diving equipment (i.e. small passages, logistics and restrictions).
- 4. Expose cave divers to the conservation concerns and ethical responsibilities that present themselves during side mount / no mount diving activities in underwater caves.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD Cave Diver or equivalent (NSS/CDS, CDAA, NACD, etc.).
- 2. Have a minimum of 50 logged cave dives.
- 3. Be at least 18 years of age.
- 4. Be proficient in buoyancy skills while wearing full cave diving equipment.
- 5. Be proficient with the concept of gas matching.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Side Mount / No Mount Diver Student Kit.
- 2. This program must include 120 minutes of cave environment bottom time while in side mount and or no mount diving configuration within at least 3 cave dives
- 3. Theory and gear setup
  - a. One confined water session (gear orientation)
  - b. One cave dive (gear tuning, skills, kick tech, buoyancy, trim)
- 4. Two cave dives (skills, proficiency)
- 5. Students taking the Side mount / No mount Diver Program must accumulate 120 minutes of bottom time in cave environment while diving in side mount / no mount configuration (in addition to the confined water session).
- 6. Students taking the Side Mount / No Mount Diver Program while using Nitrox, or Oxygen for decompression must be certified as a Technical Cave Diver or proof of equivalent experience with stage cylinders and decompression theory. If taking the course on Normoxic Trimix or Trimix students must be previously qualified at these levels or taking the course in conjunction with the side mount course
- 7. Due to the unique nature of diving a side mount / no mount configuration, crediting of bottom time will be allowed ONLY for divers with proof of 10 or more dives in side mount / no mount configuration. Only a credit of 40 minutes of bottom time will be allowed and it is recommended that instructors allow crediting of dive time only for extremely competent divers.
- 8. Environmental conditions allowing, a minimum of two cave entrances must be included in the Side Mount / No Mount Diver Program. In the event of flooding and other special circumstances, the two-cave entrance minimum can be waived by the IANTD Training Director.

### D. Equipment Requirements

- 1. IANTD Side Mount / No Mount Diver Student Kit.
- 2. Two single cylinders (80 CF or larger). An optional EANx stage cylinder containing a minimum of 50 cubic feet (1,400 free liters) of gas may be used for overhead penetration at the instructor's discretion
- 3. Two (2) Primary regulators. Each must provide ample gas flow at all depths. Each gas source must have its' own dedicated submersible pressure gauge DIN type regulator and cylinder valve connections are recommended.
- 4. A primary BCD. A backup BCD is required if the student cannot maintain buoyancy in the event of a bladder failure. If a dry suit is used, it may serve as the backup BCD.
- 5. Dive tables, depth gauge and dive timer or a dive computer, cutting device and backup cutting device.
- 6. Reels: One Primary reel per team, one safety reel per diver, and jump or gap reels as needed for dive plan to maintain continuous guideline to the surface.
- 7. One Primary light (minimum 20 watts (or equivalent HID) and two secondary lights (flashlight type).
- 8. Three (3) line arrows
- 9. Basic diving equipment: mask, fins, and exposure suit suitable for conditions at the training site(s)
- 10. Side mount harness & buoyancy device (approved by instructor prior to course dates).

### E. Program Limits

- 1. There may be no more than 2 students per Instructor
  - 2. No dives may be conducted to depths greater than the qualification of the student.
  - 3. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives.
  - 4. Air-qualified divers may not use oxygen or EANx for decompression.
  - 5. Students who use dive computers must also carry dive tables as a backup. Divers without a dive computer must use appropriate dive tables.
  - 6. All dives must be completed within both the IANTD oxygen CNS% and OTU limits.
  - 7. All appropriate safety or required decompression stops must be performed.

- 1. A confined water / equipment orientation session must be completed before conducting any advanced cave dives.
- 2. Swim with equipment to be used in program until comfortable with it.
- 3. Perform mask clearing drills in inverted (head down / feet up) position.
- 4. Perform valve shutdowns combined with switches to bailout cylinder or redundant valve in horizontal and inverted (head down / feet up) position.
- 5. Perform neutral buoyancy drills in horizontal and inverted positions (head down / feet up) while in side mount or no mount configuration
- 6. Demonstrate efficiency in performing cylinder removal in horizontal and inverted positions.
  - a. **Confined water (side mount)**: Swim 50 feet (15 meters) underwater with one cylinder removed (hand-held), replace cylinder, repeat with opposite cylinder. Repeat skills during black out scenario.
  - b. **Cave Dive (side mount)**: Swim 50 feet (15 meters) with one cylinder removed (hand-held) and perform black out drill (maintain contact with the guide line at all times), replace cylinder and repeat with opposite cylinder.
  - c. **Confined Water (no mount)**: Swim 50 feet (15 meters) with cylinder hand held, maintain neutral buoyancy. The cylinder must be positively attached to the diver via some type of tether at all times. Repeat skills during black out scenario.
  - d. Cave Dive (no mount): Swim 50 feet (15 meters) with cylinder hand held during black out drill (maintain contact with the guideline at all times), maintain neutral buoyancy. The cylinder must be positively attached to the diver via some type of tether at all times.
- 7. Demonstrate the ability to pass through at least one minor restriction without removing cylinders
- 8. Demonstrate the ability to pass through at least one major restriction while removing a cylinder (both side mount and no mount).
- 9. On at least one occasion divers must simulate the loss of the guideline in zero visibility.

### Advanced Wreck Diver and Technical Wreck Diver

### A. Purpose

1. This Program is designed to train divers in extended wreck penetration diving and the technical utilization of EANx for wreck exploration and the use of EANx and oxygen for decompression.

### B. Prerequisites

- 1. Must be qualified as an IANTD Deep Diver or equivalent. For Technical Wreck Diver Program, must also be qualified as an IANTD EANx Diver.
- Must provide proof of a minimum of 70 logged dives or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
   OR
- 1. A minimum of 40 logged dives with qualification as IANTD Wreck or Cavern Diver. If dives in the course below 130 fsw (39 msw) are planned the diver must have 100 logged dives.
- 2. Must be a minimum of 18 years of age.

### C. Program Content

- 1. This course may be taught in conjunction with a Normoxic Trimix or Trimix Diver course.
- 2. This Program must include a minimum of 150 minutes of bottom time completed within at least 6 wreck penetration dives. At the Instructor's discretion, dives may be credited as specified in the Standards. With maximum crediting of dives from other Technical Diver Programs (Cave, Technical Diver and Trimix) or experience, a minimum additional 100 minutes of bottom time must be completed on wreck dives.
- 3. To complete the course within the minimum specified dives. With 2 or more additional dives the student may graduate from the course with an overall average score of 6 points.
- 4. Land Drills:
  - a. Basic use of safety lines and reels will be performed on land.
  - b. Simulation of wire entanglement will be practiced.

### D. Equipment Requirements

- 1. All students must be taught the concept of gas matching.
- 2. All bottom mix tanks must be equipped with dual-outlet manifold valves. Independent cylinders may not be used. If a rebreather is used, it must be equipped with adequate bailout.
- 3. A stage decompression cylinder containing oxygen or an EAN mixture with at least 50% oxygen, and appropriately labeled.
- 4. Two Primary regulators must provide ample gas flow. One second-stage hose must be at least 5 feet (1.5 meters) in length; longer hoses are recommended.
- 5. A primary BCD is required and a backup BCD is recommended. Back flotation is recommended. If a dry suit is used, it may serve as the backup BCD.
- 6. Submersible dive tables as a backup to a dive computer or for control of the dive at the Instructor's discretion. If computers are used, it is recommended that two computers be used on planned decompression dives.
- 7. Two reels: one for penetration and one for decompression / lift bag deployment.
- 8. A lift bag of at least 50-lb (22.5-kg) lift capacity for a decompression marker.
- 9. Two lights: one primary light (minimum 20 watts) and one backup safety light.
- 10. Compass.
- 11. Bolt snap hooks are recommended for all equipment attached to divers, as they are less prone to entanglement.
- 12. A backup cutting tool is recommended.

### E. Program Limits

- 1. No dives may be conducted to depths greater than the qualification of the student, or 170 fsw (51 msw), whichever is shallower.
- 2. Oxygen partial pressure may not exceed 1.40 ATA during the working portion of the dives, nor exceed 1.61 ATA during the decompression portion of the dives. For the Technical Wreck Diver Program, a minimum of 6 dives must be completed using EANx with at least 23% oxygen.
- 3. Decompression Gas mixtures:
  - a. Air-qualified divers may breathe EAN 32 during decompression, if briefed on its use.
  - b. EANx-qualified divers may breathe up to EAN 40 during decompression.
  - c. Advanced EANx-qualified divers may breathe up to EAN 50 during decompression.

- d. Technical Divers or students enrolled in the Technical Wreck Program may breathe any EANx mixture or oxygen during decompression and use accelerated decompression schedules accordingly.
- 4. All dives must be completed within both the IANTD oxygen CNS% and OTU limits (Technical Wreck Diver Program only).
- 5. The Rule of Thirds must be applied from the point of entering the overhead environment until safe exit from the overhead environment portion of the dive.
- 6. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed before conducting any wreck penetration dives.
- 2. Perform a pre-dive "S" (safety) drill prior to starting dive. Check all equipment for proper function, check equipment of each dive buddy. Ascertain each team member is familiar with use and location of dive system components.
- 3. Perform an in-water "S" (safety) drill (on surface or sub-surface if sea conditions permit, or immediately when reaching the bottom).
  - a. Leak-check each team member's equipment.
  - b. Breathe underwater from both / all regulators to ensure proper functioning.
  - c. Perform light checks.
  - d. Perform valve shutdowns combined with regulator switches including shutting both regulators.
  - e. If isolator valves are used, these are also to be closed and then re-opened.
  - f. Buddies should check that all valves are back in proper position at end of drill.
  - g. On first dive with new partner, perform a gas sharing drill.
- 4. Communicate the gas turn around point in psig and if the divers are wearing different cylinder sizes, match gas per the SRF tables or per dissimilar tank volumes. This can be divided between on board the boat and upon first arrival on the bottom.
- 5. Confined or OW: Swim 60 feet (18 meters) while simulating an out-of-gas situation, then commence gas sharing via the long hose, remain at rest for three breaths, and swim for 10 minutes at a normal swim rate of 75 feet (23 meters) a minute (static water swim rate).
- 6. Confined or OW: Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet. Upon meeting gas sharing via the long hose combined with touch contact is to be performed until the line circuit is completed.
- 7. Develop proficiency in a variety of propulsion techniques including cave frog kick, modified flutter kick, shuffle kick, and pull and glide technique.
- 8. Demonstrate proficiency in use of reels and lines.
- 9. During a wreck dive, at a point after turning the dive, perform a gas sharing drill exiting the wreck for a reasonable distance / time. Exercise is to commence with Instructor at some point randomly selecting the out of air diver, who must then go to the buddy and share gas. The out-of-gas diver is to keep the regulator in his or her mouth (leaving airway open) but not breathe from it if at all possible. This drill is to be repeated on different dives until all students have been both a donor and a recipient of gas.
- 10. On a wreck dive, exit wreck with eyes closed or lights of maintaining contact with buddy and dive line using touch communications.
- 11. Repeat previous drill, except at some point the Instructor will choose one of the divers to simulate being out of gas. The out-ofgas diver must communicate the problem to a buddy via touch contact, and gas sharing is to be performed for a reasonable distance. Repeat this skill until all students have been both a donor and recipient of gas.
- 12. Perform lost diver drills.
- 13. Demonstrate either on a wreck dive or in confined water the ability to drop and recover a stage cylinder. This may be the tank used as a decompression tank or an actual penetration stage cylinder.
- 14. On at least three dives, the student must simulate a regulator failure and, while swimming, shut off the valve for the primary regulator and switch to the secondary regulator. Upon completion, the diver is to turn on the valve for the primary regulator and switch back to it. A buddy should act as safety diver during this drill.
- 15. If a Rebreather is used, the appropriate modifications to the above skills must be made.

### Closed Circuit Rebreather Advanced Wreck Diver

### A. Purpose

1. This Program is designed to train divers in extended wreck penetration diving while using CCR.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD CCR Diver
- 2. Must provide proof of a minimum of 70 logged dives or sufficient experience doing technical dives to satisfy the instructor that the student has the ability and knowledge to continue into this level of training, or a minimum of 40 logged dives with qualification as IANTD Wreck or Cavern Diver.
- 3. If dives in the course below 130 fsw (39 msw) are planned the diver must have 100 logged dives.
- 4. Must be a minimum of 18 years of age.

### C. Program Content

- 1. This course may be taught in conjunction with a CCR Normoxic Trimix or CCR Trimix Diver course.
- 2. This Program must include a minimum of 150 minutes of bottom time completed within at least 6 wreck penetration dives. At the Instructor's discretion, dives may be credited as specified in the Standards. With maximum crediting of dives from other Technical Diver Programs (Cave, Technical Diver and Trimix) or experience, a minimum additional 100 minutes of bottom time must be completed on wreck dives.
- 3. To complete the course within the minimum specified dives students must have an average of 8 points (out of 10) on he watermanship evaluations. With 2 or more additional dives the student may graduate from the course with an overall average score of 6 points.
- 4. Land Drills:
  - a. Basic use of safety lines and reels will be performed on land.
  - b. Simulation of wire entanglement will be practiced.

### D. Equipment Requirements

- 1. All students must be taught the concept of gas matching based on oxygen metabolism.
- 2. Bailout adequate to allow 1 ½ divers to exit the cave on OC must be carried by the dive team
- 3. A stage decompression cylinder containing oxygen is recommended for deco as a back up to the system
- 4. Bailout stages must be configured to ensure easy hand off to a out of gas diver. A 5 foot 1.5 meter hose is recommended
- 5. Each gas source must have its own dedicated submersible pressure gauge.
- 6. A primary BCD is required. Back flotation is recommended.
- 7. Dive tables, depth gauge and dive timer or a dive computer.
- 8. Two reels: one Primary (cave) guide reel and one (cavern or gap) safety reel.
- 9. One Primary light and one secondary light with adequate lighting characteristic to meet the accepted standard in cave diving.
- 10. A backup cutting tool is recommended.
- 11. A lift bag of at least 50-lb (22.5-kg) lift capacity for a decompression marker.
- 12. Compass.
- 13. Bolt snap hooks are recommended for all equipment attached to divers, as they are less prone to entanglement.

### E. Program Limits

- 1. No dives may be conducted to depths greater than the qualification of the student, unless taking a combined course Oxygen partial pressure may not exceed 1.30 ATA during the working portion of the dives, nor exceed 1.4 ATA during the decompression portion of the dives.
- 2. All dives must be completed within both the IANTD oxygen CNS% and OTU limits (Technical Wreck Diver Program only).
- 3. All appropriate safety or required decompression stops must be performed.

- 1. A confined water session must be completed before conducting any wreck dives.
- 2. Swim with equipment to be used in Program until comfortable with it.
- 3. Divers using a quick-release on their harness or backpack must, in confined water, swim the system while the instructor disconnects the quick-release to simulate a failure. The student is to swim the system demonstrating control of buoyancy and body positioning with the quick-release disconnected for sufficient duration to satisfy the instructor that the student is capable of managing this type failure.
- 4. Demonstrate an ability to respond to a single-bladder BCD failure by the two methods listed below. (Students using gear configurations that prevent accomplishment of these two skills will be required to wear a redundant BCD.)

- a. Completely deflate BCD and swim while maintaining buoyancy control for at least two minutes.
- b. Completely deflate BCD, ascend safely to the surface, and remain afloat for at least three minutes.

NOTE: If at any time the student starts to over-exert, or if it is obvious that the skill cannot be accomplished, the instructor is to ensure that the BCD is inflated.

- 5. Perform a pre-dive "S" (safety) drill prior to starting dive. Check all equipment for proper function. Check equipment of each dive buddy. Ascertain each team member is familiar with use and location of dive system components.
- 6. Perform an in-water "S" (safety) drill.
  - a. Leak-check each team member's equipment.
  - b. Breathe underwater from the CCR and the bailout stage (s) / all regulators to ensure proper functioning.
  - c. Perform light checks.
  - d. Perform valve shutdowns combined with switches to bailout cylinder, including handing off bailout cylinders at least once each day.
  - e. Buddies should check that all valves are back in proper position at end of drill.
  - f. On a first dive with a new partner, perform a gas sharing drill by handing off stages.
- 7. Communicate the oxygen gas turn around point.
- 8. Confined or OW: Swim 60 feet (18 meters) while simulating an out-of-gas situation, then switch to bailout cylinder, remain at rest for three breaths, and swim for 10 minutes at a normal swim rate of approximately 75 feet (23 meters) a minute (static water swim rate).
- 9. Repeat above skill with divers handing off bailout stage cylinder.
- 10. Confined or OW: Two divers 50 feet (15 meters) apart must swim along a line circuit with eyes closed not taking a breath, while slowly exhaling until they meet. Upon meeting switch to the bailout stage combined with touch contact is to be performed until the line circuit is completed.
- 11. Repeat above with diver handing off bailout cylinder.
- 12. Develop proficiency in a variety of propulsion techniques including cave frog kick, modified flutter kick, shuffle kick, and pull and glide technique.
- 13. Demonstrate proficiency in use of reels and lines.
- 14. During a wreck dive, at a point after turning the dive, perform a gas bailout drill exiting the cave for a reasonable distance / time. Exercise is to commence with Instructor at some point randomly selecting the out-of-gas diver, who must then go to his bailout stage cylinder, then at some point have the buddies exchange bailout cylinders simulating that the diver who had bailed out had used 50% of the bailout stage cylinder. The out-of-gas diver is to keep the regulator in his or her mouth (leaving the airway open) but not breathe from it if at all possible. This drill is to be repeated on different dives until all students have performed the drill.
- 15. On a wreck dive, exit wreck with eyes closed or lights off maintaining contact with buddy and dive line using touch communications.
- 16. Repeat previous drill, except at some point the Instructor will choose one of the divers to simulate a loop failure. The diver with the failed loop must communicate the problem to a buddy via touch contact, and switch to his/her bailout cylinder. This skill must be performed for a reasonable distance. Repeat this skill until all students have been the diver with the loop failure.
- 17. Perform lost diver drills.
- 18. Perform lost line drills. All emergency drills are to be repeated until the students are proficient and the instructor is satisfied with the performance.
- 19. Demonstrate on a wreck dive the ability to drop and recover a stage cylinder.
- 20. On at least three dives, the student must simulate a solenoid failure and, take corrective action.
- 21. On at least three (3) occasions, a loop failure drill must be completed and on at least one drill the diver must remain on the bailout stage cylinder for a minimum of 10 minutes. The student is to note the bailout gas used and distance covered. At the end of the dive compute how far under the same conditions could the diver have traveled on the bailout cylinder. Also how much total gas it would take to bailout to the exit point of the cave. Then compute how much oxygen and or other gas would be needed to complete the decompression.
- 22. Repeat all drills and skills from the CCR Skills tables while on cave dives.

### IAND, INC. / IANTD LEADERSHIP PROGRAMS

### A. Purpose

1. These Programs are designed to develop qualified IANTD Divemasters and Dive Supervisors.

### B. Qualification Prerequisites

- 1. Oxygen Provider.
- 2. Diving First Aid.
- 3. CPR.
- 4. Rescue Diver.

### C. Text / Media

All IANTD courses require Student Kits to certify Dive Leaders. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD leadership or diver program name" followed by the words Student Kit.

### D. Prerequisites

- 1. Must be a minimum of 18 years of age.
- 2. Provide proof of insurance or financial responsibility for supervising students in the water.
- 3. Be an IANTD Member and remit annual Dive Master Member fees.

### D. Program Limits

- 1. All limits are identical to the corresponding Diver Programs.
- 2. On all dives, the IANTD Dive Tables must be used as either the primary decompression management or as a backup to a dive computer, custom software program or other tables approved by the IANTD BOD.

### E. Qualification Requirements

- 1. Upon completion of all listed academic and water skills / dives to the Instructor's satisfaction, a wall certificate and appropriate IANTD Supervisor qualification card will be issued.
- 2. Leadership position candidates with unsafe attitudes, or demonstrating inappropriate dive habits, must not be qualified.
- 3. Training is purchased upon enrollment. Qualification is earned through the candidate's performance and knowledge demonstrated during the Program.
- 4. It is recommended that all training dives be logged in the IANTD Recreational or Technical Diving logbook.
- 5. Become an IANTD Member and remit annual Dive Master Member fees.

### F. Qualification Renewal

- 1. Upon qualification candidates should stay abreast of new technologies and / or practices in sport and technical diving.
- 2. Proof of insurance is required.
- 3. Remain as an active IANTD Member and remit annual renewal fees.
- 4. Complete the instructor physical skill evaluation and have it witnessed by another diver or instructor plus complete the medical questionnaire, or complete a VO<sub>2</sub> max test, or complete an annual physical that includes a stress test or fill out the medical questionnaire and a notarized statement to the effect the instructor does a physical training program consisting of at least 20 minutes of aerobic activity 3 times a week.

NOTE: IANTD Rebreather Divers may supervise all Sport Diving courses while using a Rebreather on which they are IANTD Supervisor certified, provided they carry sufficient bailout gas capacity. To supervise an OW Rebreather Diver course or a Rebreather Diver course, the supervisor must be qualified on the Rebreather to be used by the student. The supervisor may use a CCR or SCR (if qualified on it) or OC. Rebreathers may only be used within their manufacturer's stated limits.

### Divemaster

### A. Purpose

- This Program is designed to provide responsible training for those persons wishing to supervise IANTD divers. These include IANTD Open Water Diver, IANTD EANx Diver, IANTD Advanced EANx Diver, and IANTD Deep Diver. Dive Masters may teach Snorkel Skin Diver. Dive Masters who complete item 2 under program content may teach the IANTD OW Free Diver course. If the IANTD Divemaster is Recreational Trimix and / or Advanced Recreational Trimix certified than they may supervise these courses as well.
- 2. IANTD Divemasters may supervise, escort and assist in all IANTD Open Water SCUBA Diver Programs but cannot conduct SCUBA training exercises unless under the direction of a qualified IANTD Advanced EANx Instructor.
- 3. IANTD Divemasters are qualified to plan and execute emergency procedures appropriate for the diving activity and environment.
- 4. Upon completion of the program, Divemasters may conduct any specialized scuba diving activities for which they have received appropriate training. If diving in conditions significantly different from those previously experienced the Divemaster shall require an appropriate orientation.

### B. Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Diver, or Advanced Recreational Trimix Diver, First Aid to include CPR, Oxygen Provider and IANTD Rescue or equivalent. If an equivalent certification is accepted, CPR and Oxygen Provider must be current within the last two years. Qualification in two optional IANTD Specialty Programs is recommended.
- 2. Must provide proof of a minimum of 60 logged dives.
- 3. Must be a minimum of 18 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Divemaster Student Kit.
- 2. This Program must include a minimum of 175 minutes of bottom time assisting with IANTD standard dives or classes under the supervision of an IANTD Instructor.
- 3. Must complete the academic sessions utilizing the IANTD Divemaster manual, review the IANTD Standards and Procedures complete knowledge reviews and pass the IANTD Divemaster exam with a minimum score of 80%.
- 4. To be qualified to teach the Free Diver course the Divemaster Candidate must demonstrate the ability to free dive to 50 fsw (15 msw) by actually doing a free dive to 50 fsw (15 msw) or by swimming 120 feet (36 meters) underwater in a confined water area.
- 5. Complete an Emergency Assistance Plan and Risk Analysis for a scenario to be assigned by the Instructor.
- 6. Students must be able to demonstrate all Open Water Diver practical skills in a manner showing the highest level of mastery and competence.
- 7. Students must be able to demonstrate competence in all scuba skills, and ability to cope with the most demanding operational factors of the region. Influencing factors may include the following:
  - a. Depth range exceeding 70 fsw (21 msw)
  - b. Underwater visibility
  - c. Size and experience of the diving group supervised
  - d. Equipment used
  - e. Current
  - f. Surface conditions
  - g. Water temperature
- 8. Students must be able to demonstrate mastery of the techniques involved in planning and executing dives beyond the depth ranges typical for recreational scuba diving in the local environment (greater than 100 fsw (30 msw)).

### D. Equipment Requirements

- 1. IANTD Divemaster Student Kit.
- 2. One of the second-stage regulators on the primary gas supply must be attached with a hose that is at least 5 feet (1.5 meter) long (longer hoses are recommended). If a Rebreather is used, it must be equipped with adequate bailout.
- 3. Fulfill all Equipment Requirements as specified in the program being supervised.

### E. Program Limits

1. No dives may be conducted to depths greater than 130 fsw (39 msw).

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2. All appropriate safety or required decompression stops must be performed.

### F. Qualification Renewal

- 1. Assist in a minimum of 2 IANTD Programs annually.
- 2. Log a minimum of 12 non-Divemastering dives annually.
- 3. Maintain current liability insurance and IANTD membership.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. To be allowed to teach the free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive or by swimming 120 feet (36 meters) underwater in a confined water area.
- 3. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters), and commence gas sharing. While gas sharing, continue to swim for at least 10 minutes while maintaining a swim rate of approximately 50 feet (15 meters) per minute.
- 4. Demonstrate recognition of emergency situations and basic underwater search skills and demonstrate a rescue of a diver from a depth no greater than 20 fsw (6 msw) to the surface, including removal of equipment. Tow for a distance of about 100 feet (30 meters) while simulating rescue breaths and remove casualty from the water. Manage emergency situation including co-ordination with emergency services.
- 5. Demonstrate proficiency in underwater navigation, using both instruments and natural navigation safely leading other divers.
- 6. Demonstrate proficiency of water skills taught in Open Water, Deep Diver and Advanced EANx Diver Programs.
- 7. Assist in water skills teaching as described in Program Content section.
- 8. Complete Watermanship drills number 3 & 4 as found in the Advanced Nitrox Instructor Watermanship Evaluation. (32 points passing)
- 9. Dive planning, preparation and conduct. General group control and schedule application.
  - a. Site selection taking into account team members' capabilities and environmental factors.
  - b. Emergency plan and equipment preparation.
  - c. Decompression calculation and relevant factors.
  - d. Descend and ascend aids.
  - e. Dive limits (general).
  - f. Use of buoys and flags.
  - g. Dive briefing.
  - h. Kitting up and pre dive checks.
  - i. Entry and descend control.
  - j. Monitoring of dive plan and environmental conditions.
  - k. Awareness of diver's stress levels.
  - I. Identification of underwater hazards.
  - m. Appropriate reaction to problems and emergencies.
  - n. Ascend and exit control.
  - o. Debriefing and other post dive procedures.
  - p. Consideration of off gassing phase (avoid potential danger altitude, physical activities, etc.)
  - q. Post dive care of equipment.
  - r. Proper documentation of the dive.

### Cavern Divemaster

### A. Purpose

1. This Program is designed to extend the diver's knowledge to safely guide professional cavern tours of non-cavern certified divers (maximum 4) in the overhead environment. Focus of this program is on safety, conservation, professionalism and preservation

### B. Prerequisites

- 1. Must be qualified as an IANTD Divemaster and IANTD Full Cave Diver or equivalent with proof of a minimum of 20 non-training logged cave dives or sufficient experience to satisfy the instructor that the student has the ability and knowledge to continue into this level of training.
- 2. Must be certified in First Aid to include CPR, Oxygen Provider and IANTD Rescue or equivalent. If an equivalent certification is accepted, CPR and Oxygen Provider must be current within the last two years.
- 3. Complete the academic development sessions, open water skills circuits, emergency skills, and IANTD Cavern Divemaster written exam with a minimum score of 80%.
- 4. Must be a minimum of 18 years of age.

### C. Program Content

- 1. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Divemaster Student Kit.
- 2. This Program must include a minimum of 120 minutes of OW bottom time completed within 4 dives. Even if the time and skill requirements are met within fewer than 4 dives, the minimum 4 dives must be made. 2 different cavern sites must be used during the course.
- 3. A review and demonstration of the following skills during open water and cavern dives:
  - a. General Briefing.
  - b. Pre-dive procedures.
  - c. Equipment Checks.
  - d. Simulated Cavern Experience
  - e. Running reel in cavern zone (if line exists line must be run next to it).
- 4. Each Cavern Divemaster candidate will be evaluated on his or her ability to perform various aspects of a simulated Cavern Experience. These are to include:
  - a. General Briefing.
  - b. Site briefing.
  - c. Pre-dive procedures.
  - d. Simulated Cavern Experience.
  - e. Participant control.
  - f. Emergency procedures.

### D. Equipment Requirements

- 1. IANTD Divemaster Student Kit and all IANTD Student Kits up to current level of qualification.
- 2. A safety or decompression gas cylinder (if used) rigged as either a pony or stage cylinder. Gas cylinders must be oxygen clean and oxygen serviceable where needed.
- 3. All full cave diving gear as required in the Cave Diver Program.

### E. Program Limits

- 1. There may be no more than 4 students per Instructor.
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 3. All dives must be conducted using EAN 21 to EAN 40 (maximum 40% oxygen).
- 4. All appropriate safety stops must be performed.
- 5. All dives are to be planned for no required decompression stop.

- 1. Proper Equipment configuration
- 2. Safe entry and exit

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- 3. Pre-dive safety checks.
- 4. Buoyancy and Trim.
- 5. Propulsion Techniques.
- 6. Hovering.
- 7. Equipment Manipulation.
- 8. Gas / Valve shut downs on each dive.
- 9. Air sharing techniques.
- 10. Use of reels / guidelines.
- 11. Open water stress circuit including but not limited to:
  - a. No mask swimming.
  - b. Zero visibility line following.
  - c. Air sharing.
  - d. Air sharing / zero visibility / touch contact.
- 12. Rescue Scenarios (open water):
  - a. Underwater swim with an unconscious diver.
  - b. Surfacing with unconscious diver.

### **Technical Diver Supervisor**

### A. Purpose

- 1. This Program is designed to provide recognition of leadership qualifications of competent divers. A Technical Diver Supervisor is a Leadership or Instructor-In-Training rating.
- Technical Diver Supervisors may supervise divers in OW and students in all IANTD Standard Programs (except Overhead Environment), IANTD Technical Diver and, (if they meet the prerequisites); Trimix, Rebreather, Wreck, and Cave Diver, under the direction of a qualified IANTD Instructor.

### B. Prerequisites

#### For All Levels:

- 1. Must be a minimum of 18 years of age.
- 2. Must be qualified as an IANTD Divemaster or equivalent.
- 3. Must be qualified as First Aid, Oxygen Provider and IANTD Rescue or equivalent. If an equivalent certification is accepted, CPR and Oxygen Provider must be current within the last two years.
- 4. If dives are being conducted deeper than the standards allow for Wreck, Cave or Rebreather; the candidate must obtain Technical training appropriate for the depth range being supervised.

#### For Technical Diver:

- 5. Must be qualified as an IANTD Technical Diver.
- 6. Must provide proof of a minimum of 150 logged dives, of which at least 50 were deeper than 130 fsw (39 msw) and at least 10 were to a depth of at least 190 fsw (57 msw).

#### For Trimix:

- 7. Must be qualified as an IANTD Trimix Diver and IANTD Technical Diver Supervisor.
- 8. Must provide proof of a minimum of 200 logged dives, of which at least 20 were Trimix dives deeper than 150 fsw (45 msw) and at least 10 were to a depth of at least 200 fsw (60 msw)

#### For Rebreather:

- 9. Must be qualified as an IANTD Rebreather Diver at the level in which dives are being conducted.
- 10. Must provide proof of a minimum of 200 logged dives of which at least 50 were on Rebreathers.

#### For Wreck:

- 11. Must be qualified as an IANTD Technical Wreck Diver.
- 12. Must provide proof of a minimum of 100 logged dives, of which at least 35 were wreck dives.

#### For Cave:

- 13. Must be qualified as an IANTD Advanced Cave Diver.
- 14. Must provide proof of a minimum of 100 logged dives, of which at least 60 were cave dives.

### C. Program Content

- 1. Must assist in at least two courses at the level applied for and give at least two lectures. Must supervise at least one complete confined water session and spend 200 minutes of bottom time in direct supervision of divers (under guidance of an Instructor).
- 2. This Program must include a minimum of 2 evaluation dives at each level of qualification being qualified, in addition to the inwater time specified above.
- 3. Advanced EANx Instructors who have met the diving and qualification level prerequisites will be awarded Dive Supervisor recognition by assisting in one Program at the specific level and recommendation of the instructor.

### **D. Equipment Requirements**

- 1. All IANTD Student Kits up to current level of qualification.
- 2. Fulfill all Equipment Requirements as specified in the general Technical Diver Programs overview.

### E. Program Limits

1. Same as for the applicable IANTD Technical Diver Program.

### F. Water Skills Development

1. Assist on all dives of a course in each level being qualified for (IANTD Technical Diver, Trimix Diver, Wreck Diver, Cave Diver, or Rebreather Diver Programs).

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- 2. Demonstrate all skills taught in the applicable IANTD Program(s) at Demonstration quality.
- 3. Demonstrate overall water skills and supervision abilities to the satisfaction of the Instructor.
- 4. Complete Watermanship drills number 3 & 4 as found in the Advanced Nitrox Instructor Watermanship Evaluation. (32 points passing)

### IAND, INC. / IANTD SPORT DIVING INSTRUCTOR PROGRAMS

### A. Purpose

1. These Programs are designed to develop qualified IANTD Sport Diving Instructors.

### B. Qualification Prerequisites

- Must show proof of prior qualification in Oxygen Provider, AED, CPR and in Diving First Aid, or complete these qualifications in conjunction with the IEC. Once qualified and after application to HQ, Advanced EANx Instructors and above may teach AED, CPR and Oxygen Provider as well as Diving First Aid. In order to teach, this skill set must be renewed every two years by practice and update from HQ.
- 2. Rescue Diver and Divemaster.
- 3. Proof of Current Medical Examination or physical fitness results.

### C. Teaching Prerequisites

- 1. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.
- 2. Be an IANTD Member and remit annual Instructor / Dive Master Member fees.

### D. Text / Media

- 1. All IANTD courses require Student Kits to certify Divers and/or Instructors. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "Instructor or Diver program name" followed by the words Instructor or Diver Kit.
- 2. IANTD Power Point Slides for any/all IANTD Programs being taught.

### B. Program Limits

- 1. IAND, Inc./IANTD Instructors may teach Open Water Programs through other agencies it recognizes.
- 2. All limits are identical to the corresponding Diver Programs.
- 3. On all dives, the IANTD Dive Tables must be used as either the primary decompression management or as a backup to a dive computer or custom software program or other tables approved by the IANTD BOD.

### C. Qualification Requirements

- 1. Upon completion of all listed academic and water skills / dives to the Instructor Trainer's satisfaction, a wall certificate and appropriate IANTD Instructor qualification card will be issued.
- 2. Instructor candidates with unsafe attitudes, or demonstrating inappropriate dive habits, must not be qualified. Training is purchased upon enrollment. Qualification is earned through the candidate's performance and knowledge demonstrated.
- 3. It is recommended that all training dives be logged in the IANTD Recreational or Technical Diving logbook.

### D. Qualification Renewal

- 1. Upon qualification candidates shall stay abreast of new technologies and/or practices in sport and technical diving.
- 2. For all professionals, Defined as Divemasters, Supervisors, Instructors and Instructor Trainers, proof of insurance is required.
- 3. Remain as an active IANTD Member and remit annual Instructor / Divemaster renewal fees.
- 4. Complete the instructor physical skill evaluation and have it witnessed by another diver or instructor plus complete the medical questionnaire, or complete a VO<sub>2</sub> max test, or complete an annual physical that includes a stress test or fill out the medical questionnaire and a notarized statement to the effect the instructor does a physical training program consisting of at least 20 minutes of aerobic activity 3 times a week.

NOTE: ALL IANTD Instructors who are qualified as rebreather dive supervisors (or higher) may teach Sport Diver courses up to the level of their rebreather qualification ratings while using the rebreather on which they are supervisor level (or higher) qualified. In order to teach a specific rebreather diver course, the instructor must be an IANTD Rebreather Instructor on the unit for which the student diver wishes to be certified. Rebreathers may only be used within their manufacturer's stated limits.

Instructors shall contact the IANTD Training Director for additional information on a diver course without a corresponding Instructor course outline.

### Assistant Instructor Program

### A. Purpose

1. This Program is designed to train qualified IANTD Divemasters, to teach a part of the IANTD Open Water Diving Program, and conduct relevant assessment. These individuals may teach and assess the theoretical part of all Open Water Diving Program courses, the complete Snorkeling course, and the complete Free Diver course providing that they perform skill number 2 described in water skills development of this course. Assistant instructors that have gained progressive experience in teaching may also teach and assess all confined water skills of any level of Open Water Diving Program under the direct supervision and authorization of an IANTD Open Water Instructor (or higher). If diving in conditions significantly different from those previously experienced the Assistant Instructor shall require an appropriate orientation.

### B. Prerequisites

- 1. Must be qualified as an IANTD Divemaster or equivalent.
- 2. Must provide proof of a minimum of 80 logged dives, of which at least 15 were Divemastering dives.
- 3. Must have assisted in at least one complete OW Diver course.
- 4. Must be current in CPR and First Aid qualifications, plus qualified in SCUBA Rescue and as an Oxygen Provider.
- 5. Must be a minimum of 18 years of age.

### C. Program Content

- 1. A 5-day Program directing the Assistant Instructor candidates in the methods and techniques of training and assessing IANTD Divers. Teaching experience must be acquired by assisting (in both theory and practice) in a series of actual or simulated training sessions under the direct supervision and assessment of the IT.
- 2. Confined water practical skills of the IANTD Open Water Program are to be explained and practiced. Presentation level proficiency in the practical skills, and the ability to teach and evaluate on them effectively, according to IT discretion must be demonstrated by all candidates.
- 3. All lecture topics in the IANTD Open Water Program IT Power Point slides must be studied by the candidates and discussed in class. A selection of slides chosen by the IT shall be presented by the candidates, following the processes of lecture preparation, planning and delivery. Proficiency level in lecturing skills according to IT discretion must be demonstrated by all candidates.
- 4. All candidates must demonstrate the ability to control and supervise a diving group in an effective manner, according to IT discretion.
- 5. The IDC is staffed by at least one Open Water IT plus any required Instructors at a minimum level of Open Water Instructor, depending on number of participants.

### D. Equipment Requirements

- 1. IANTD Sport Diving Instructor Kit.
- 2. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

### E. Program Limits

- 1. There may be no more than 6 candidates per Instructor Trainer. This ratio may be increased by 2 candidates for each Assisting IANTD Instructor, up to a maximum of 10 candidates with 2 IANTD Instructors per class session.
- 1. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 2. All appropriate safety or required decompression stops must be performed.

### F. Qualification Renewal

- 1. Assist in a minimum of 2 IANTD Programs annually
- 2. Log a minimum of 12 non teaching and non Divemastering dives annually.
- 3. Maintain current liability insurance and IANTD membership.

### G. Water Skills Development

1. Complete Watermanship Evaluation

- 2. To be allowed to teach the OW Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive or by swimming 120 feet (36 meters) underwater in a confined water area.
- 3. Demonstrate an open water rescue of a diver from a depth no greater than 20 fsw (6 msw), including:
  - a. Recognition of emergency situations
  - b. Controlled casualty recovery from depth
  - c. Effective emergency surface actions
  - d. Removal of equipment
  - e. Surface tow for a distance of about 100 feet (30 meters) while simulating rescue breaths,
  - f. Casualty recovery from water
  - g. Simulation of full application of emergency plan including co-ordination with local emergency services.
- 4. Deploy a lift bag in less than 1½ minute.
- 5. Demonstrate proficiency in illustrating and teaching any IANTD Open Water Program confined water practical skills as per assignments given by IT.
- 6. Demonstrate practical lesson planning, preparation and conduct for confined water skills. Procedure must include:
  - a. Preparation
  - b. Planning
  - c. Briefing
  - d. Skill demonstration
  - e. Student practice and group supervision and control
  - f. Problem recognition and solving
  - g. Student evaluation
  - h. Debriefing.

### **Open Water Instructor Development Program**

### A. Purpose

1. This Program is designed to train qualified IANTD Divemasters and Assistant Instructors, who are not already Scuba Instructors, to teach IANTD Open Water Diving Programs plus IANTD Oxygen Provider and IANTD Diving First Aid. These individuals may teach and assess Snorkel Skin Diver, OW Free Diver, Open Water, Advanced Open Water, Deep Diver, and Rescue Diver Programs. Open Water Instructors may also supervise Assistant Instructors. If diving in conditions significantly different from those previously experienced the Instructor shall require an appropriate orientation.

### B. Prerequisites

- 1. Must be qualified as an IANTD Divemaster, Assistant Instructor or equivalent.
- 2. Must provide proof of a minimum of 100 logged dives, of which at least 15 were Deep Diver dives between 90 fsw (27 msw) and 130 fsw (39 msw).
- 3. Must have assisted in at least one course complete OW Diver course and one Advanced Open Water Diver course.
- 4. Must be current in CPR and First Aid qualifications, plus qualified in SCUBA Rescue and as an Oxygen Provider.
- 5. Must be a minimum of 18 years of age
- 6. To be able to teach EANx as an OW instructor must be qualified as an EANx Diver with proof of a minimum of 10 dives on EANx.

### C. Program Content

- 1. A 7-day Program directing the Instructor candidate in the methods and techniques of training IANTD Divers. The course also includes qualification as Diving First Aid Instructor. Teaching experience must be acquired by assisting (in both theory and practice) in a series of actual or simulated training sessions under the direct supervision and assessment of the IT.
- 2. The IDC is staffed by at least one Open Water IT plus one other Open Water Instructor of senior standing, or higher. One more Open Water Instructor of senior standing, or higher, may be utilized according to number of participants.
- 3. Confined Water and Open Water practical skills of the IANTD Open Water Program are to be explained and practiced. Presentation level proficiency in the practical skills, and the ability to teach and evaluate on them effectively, according to IT discretion must be demonstrated by all candidates. Candidates shall not be given information in advance, on the precise skill to be assessed.
- 4. All lecture topics in the IANTD Open Water Diver Program slides must be studied by the candidates and discussed in class. A selection of IANTD slides chosen by the IT shall be presented by the candidates, following the processes of lecture preparation, planning and delivery. Proficiency level in lecturing skills according to IT discretion must be demonstrated by all candidates. Candidates shall not be given information in advance, on the precise topic to be assessed.
- 5. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Instructor Trainer Slides.
- 6. All candidates must demonstrate the ability to control and supervise a diving group in an effective manner, according to IT discretion.
- 7. Candidates shall demonstrate to the IT responsible judgment on site criteria including weather, depth, visibility, water movement and level of supervision required.
- 8. The IDC is staffed by at least one IT plus one other Open Water Instructor, or higher. One more Open Water Instructor, or higher, may be utilized according to number of participants
- 9. Candidates eligible to teach EANx as a specialty must demonstrate ability to demonstrate ability to do so.

### D. Equipment Requirements

- 1. IANTD Sport Diving Instructor Kit.
- 2. Equipment Requirements listed in the IANTD Diver Program the Instructor plans to teach are mandatory.
- 3. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

### E. Program Limits

- 1. There may be no more than 6 candidates per Instructor Trainer. This ratio may be increased by 2 candidates for each assisting IANTD Instructor, up to a maximum of 10 candidates with 2 IANTD Instructors per class session
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 3. All appropriate safety or required decompression stops must be performed.

### F. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Open Water Diver Programs annually, or co-teach 3 IANTD Open Water Diver Programs.
- 2. Fulfill all Qualification Renewal requirements stated under IANTD Sport Diving Instructor Programs.

- 1. Complete Watermanship Evaluation
- 2. To be allowed to teach the OW Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive or by swimming 120 feet (36 meters) underwater in a confined water area.
- 3. Remove SCUBA gear and make an ESA, then swim 30 feet (9 meters) from the point of ditching SCUBA. After taking 3 breaths surface dive swim to and don SCUBA gear and manual (either simulated or actual) gas share for a distance of at least 300 feet (90 meters) while maintaining a minimum swim pace of 75 feet (23 meters) per minute.
- 4. Swim on back with full SCUBA gear on for a distance of at least 300 feet (90 meters), then remove SCUBA gear and use it as a front-mounted platform, and swim an additional 300 feet (90 meters).
- 5. Perform valve shutdowns and regulator switches simulating equipment failure in less than 1 minute.
- 6. Deploy a lift bag in less than 1½ minute.
- 7. Demonstrate an open water rescue of a diver from a depth no greater than 20 fsw (6 msw), including:
  - a. Recognition of emergency situations
  - b. Controlled casualty recovery from depth
  - c. Effective emergency surface actions
  - d. Removal of equipment
  - e. Surface tow for a distance of about 100 feet (30 meters) while simulating rescue breaths
  - f. Casualty recovery from water
  - g. Simulation of full application of emergency plan including co-ordination with local emergency services.
- 8. Demonstrate practical lesson planning, preparation and conduct for both confined and open water skills. Procedure must include the following:
  - a. Preparation
  - b. Planning
  - c. Briefing
  - d. Skill demonstration
  - e. Student practice and group supervision and control
  - f. Problem recognition and solving
  - g. Student evaluation
  - h. Debriefing.
- Demonstrate proficiency in illustrating and teaching any IANTD Open Water Program practical skills (confined water and open water) as per assignments given by IT. Candidates shall be exposed to simulated in-water emergencies, group dynamics, behavioral problems and typical learning difficulties.
- 10. Complete all skills as required for Instructor status.
- 11. Complete OW teaching skills for Deep Diver Program on at least one dive, and demonstrate other OW teaching skills on a second dive per assignment given by IT.

Mandatory watermanship evaluations for all Instructor Candidates (80 points passing): All Instructor Programs must include the following water skills and physical fitness evaluations, which are in addition to water skills listed above. These evaluations must all be done at one time, with no more than 5 minutes rest period between skills. Repeat these evaluations at each Instructor level, if it has been more than three months since the last evaluation.

#### Skill One (20 points)

Swim for a distance of 900 feet (270 meters). Subtract four minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in12 minutes or less, the score would be 20 points).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
8 minutes or less 20	11:01 to 11:20 17	12:46 to 13:00 14	14:16 to 14:30 10
8:01 to 8:40 19 ½	11:21 to 11:40 16 ½	13:01 to 13:15 13 ½	14:31 to 14:45 9
8:41 to 9:20 19	11:41 to 12:00 16	13:16 to 13:30 13	14:46 to 15:00 8
10:01 to 10:20 18 ½	12:01 to 12:15 15 ½	13:31 to 13:45 12 ½	15:01 to 15:15 6
10:21 to 10:40 18	12:16 to 12:30 15	13:46 to 14:00 12	15:16 to 15:30 4
10:41 to 11:00 17 ½	12:31 to 12:45 14 1/2	14:01 to 14:15 11	15:31 to 16:00 2

#### Skill Two (20 points)

Swim 1,800 feet (540 meters) using mask, snorkel and fins (swim with fins only; handicapped divers may use both hands and feet).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
15 minutes or less 20	16:41 to 17:00 17	18:41 to 19:00 12	20:21 to 20:30 05
15:00 to 15:20 19 ½	17:01 to 17:20 16 ½	19:01 to 19:20 11	20:31 to 20:40 04
15:21 to 15:40 19	17:21 to 17:40 16	19:21 to 19:40 10	20:41 to 20:50 03
15:41 to 16:00 18 ½	17:41 to 18:00 15	19:41 to 20:00 08	20:51 to 21:00 02
16:01 to 16:20 18	18:01 to 18:20 14	20:01 to 20:10 07	over 21 minutes 00
16:21 to 16:40 17 <sup>1</sup> / <sub>2</sub>	18:21 to 18:40 13	20:11 to 20:20 06	

Skill Three (20 points) Swim while wearing SCUBA gear on the surface, breathing through a snorkel, for a distance of 800 feet (240 meters). Subtract 3 minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in 11 minutes or less, the score would be 20 points).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
8 minutes or less 20	9:31 to 9:45 17	10:31 to 10:40 12	11:21 to 11:30 05
8:01 to 8:20 19 ½	9:46 to 10:00 16	10:41 to 10:50 11	11:31 to 11:40 04
8:21 to 8:40 19	10:01 to 10:10 15	10:51 to 11:00 10	11:41 to 11:50 02
8:41 to 9:00 18 ½	10:11 to 10:20 14	11:01 to 11:10 08	11:51 to 12:00 01
9:01 to 9:15 18	10:21 to 10:30 13	11:11 to 11:20 06	over 12 minutes 00
9:16 to 9:30 17 ½			

#### Skill Four (20 points)

Swim while wearing SCUBA gear for a distance of 1,800 feet (540 meters). Subtract one minute from actual time for divers using double tanks (e.g., if performed in 17 minutes or less, the score would be 20 points). Subtract two minutes from actual time for divers using double tanks plus two stage tanks (Trimix Instructor candidate; e.g., if performed in 18 minutes or less, the score would be 20 points)

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
16 minutes or less 20	18:31 to 19:00 17	21:30 to 22:00 14	23:11 to 23:20 08
16:01 to 16:30 19 ½	19:01 to 19:30 16 1/2	22:01 to 22:15 13	23:21 to 23:30 06
16:31 to 17:00 19	19:31 to 20:00 16	22:16 to 22:30 12	23:31 to 23:40 04
17:01 to 17:30 18 ½	20:01 to 20:30 15 1/2	22:31 to 22:45 11	23:41 to 23:50 02
17:31 to 18:00 18	20:31 to 21:00 15	22:46 to 23:00 10	23:51 to 24:00 01
18:01 to 18:30 17 ½	21:01 to 21:30 14 ½	23:01 to 23:10 09	over 24 minutes 00

#### Skill Five (20 points)

Swim for a distance of 50 feet (15 meters), without breathing, and commence gas sharing via alternate second-stage regulator with another diver. While continuing to share gas, swim a distance of 1,200 feet (360 meters). Time for scoring begins when both divers begin swimming while sharing gas. Subtract 5 points for each failed attempt by the diver to complete the 60-foot swim.

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
10:00 or under 20	11:41 to 12:00 17	13:16 to13:30 14	15:21 to 15:30 06
10:01 to 10:20 19 ½	12:01 to 12:15 16 ½	13:31 to 13:45 13	15:31 to 15:40 04
10:21 to 10:40 19	12:16 to 12:30 16	13:46 to 15:00 12	15:41 to 15:50 02
10:41 to 11:00 18 ½	12:31 to 12:45 15 1/2	15:01 to 15:10 10	15:51 to 16:00 01
11:01 to 11:20 18	12:46 to 13:00 15	15:11 to 15:20 08	over 16 minutes 00
11:21 to 11:40 17 ½	13:01 to 13:15 14 ½		

# **Open Water Instructor Crossover**

### A. Purpose

1. This Program is designed to cross over from other agencies qualified IANTD Open Water Instructors who can train qualified IANTD Divemasters and Assistant Instructors, who are not already Scuba Instructors, to teach IANTD Open Water Diving Programs plus IANTD Oxygen Provider and IANTD Diving First Aid. These individuals may teach Snorkel Skin Diver, OW Free Diver, Open Water, Advanced Open Water, Deep Diver, and Rescue Diver Programs. Open Water Instructors may also supervise Assistant Instructors. If diving in conditions significantly different from those previously experienced the Instructor shall require an appropriate orientation.

### **B.** Prerequisites

- 1. Must be qualified as a Sport Diving Instructor in active teaching status with an internationally accredited Scuba association.
- 2. Must be qualified as an Oxygen Provider and in Diving First Aid, or complete these qualifications in conjunction with the IEC.
- 3. Must provide proof of a minimum of 110 logged dives.
- 4. Must be a minimum of 18 years of age.
- 5. To be able to teach EANx as an OW instructor must be qualified as an EANx Diver with proof of a minimum of 10 dives on EANx.

#### C. Program Content

- 1. The IANTD OW Instructor IEC is a comprehensive evaluation Program conducted by an IANTD Instructor Trainer. One or more Open Water Instructor of senior standing, or higher, may be utilized according to number of participants This Program normally incorporates 1 ½ days.
- 2. Completion of applicable water skills from section H. and the OW Instructor mandated watermanship listed in the OW Instructor program.
- 3. Complete review of the Standards and Procedures (S & P) by the IT.
- 4. All lectures completed with IANTD Course-specific Slides pertaining to the theory in the IANTD Instructor Trainer Slides.
- 5. Demonstrate proficiency in teaching and assessing Open water program lectures and skills in a series of actual or simulated training sessions under the direct supervision and assessment of the IT. Candidates shall not be given information in advance, on the precise lecture or skill to be assessed.
- 6. Complete written exam on all topic areas able to teach, S & P's as well as risk mitigation.
- 7. Candidates eligible to teach EANx as a specialty must demonstrate ability to demonstrate ability to do so.

### D. Equipment Requirements

- 1. IANTD Sport Diving Instructor Kit.
- 2. All Equipment Requirements listed in the IANTD Diver Program the Instructor plans to teach are mandatory.
- 3. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

#### E. Program Limits

- 1. There may be no more than 6 candidates per Instructor Trainer. This ratio may be increased by 2 candidates for each assisting IANTD Instructor, up to a maximum of 10 candidates with 2 IANTD Instructors per class session.
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 3. All appropriate safety or required decompression stops must be performed.

### F. Qualification Renewal

- 1. Teach a minimum of 2 IANTD OW Diver Programs annually, or co-teach 3 IANTD OW Diver Programs.
- 2. Fulfill all Qualification Renewal requirements stated under IAND, Inc./IANTD Sport Diving Instructor Programs.

### G. Water Skills Development

#### NOTE: Water skills are required for all Instructors crossing over from other agencies.

- 1. To be allowed to teach the OW Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive or by swimming 120 feet (36 meters) underwater in a confined water area.
- 2. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters), and commence gas sharing. While gas sharing, continue to swim for at least 10 minutes while maintaining a swim rate of approximately 75 feet (23 meters) per minute.
- 3. Swim underwater without surfacing with mask, snorkel, and fins for a distance of at least 100 feet (30 meters).
- 4. Swim without wearing a mask while gas-sharing using an alternate gas source for a distance of at least 100 feet (30 meters).
- 5. Demonstrate an open water rescue of a diver from a depth no greater than 20 fsw (6 msw), including:
  - a. Recognition of emergency situations
  - b. Controlled casualty recovery from depth

- c. Effective emergency surface actions
- d. Removal of equipment
- e. Surface tow for a distance of about 100 feet (30 meters) while simulating rescue breaths,
- f. Casualty recovery from water
- g. Simulation of full application of emergency plan including co-ordination with local emergency services.
- 6. Demonstrate practical lesson planning, preparation and conduct. Procedure must include the following:
  - a. Preparation
  - b. Planning
  - c. Briefing
  - d. Skill demonstration
  - e. Student practice and group supervision and control
  - f. Problem recognition and solving
  - g. Student evaluation
  - h. Debriefing.
- 7. Demonstrate teaching as per IT assignment.
- 8. Demonstrate proficiency in illustrating and teaching any IANTD Open Water Program practical skills (confined water and open water) as per IT assignments. Candidates shall be exposed to simulated in-water emergencies, group dynamics, behavioral problems and typical learning difficulties.

# Advanced EAN<sub>x</sub> Instructor Crossover

### A. Purpose

 This Program is designed to develop qualified IANTD EANx and Advanced EANx Instructors. An IANTD EANx Instructor may qualify IANTD Snorkel Skin Diver, IANTD OW Free Diver, IANTD Open Water Diver, IANTD OWND, IANTD OWRD, IANTD Advanced Open Water Diver, IANTD EANx Diver, and IANTD Specialty Diver ratings. An IANTD Advanced EANx Instructor may award all of the aforementioned Open Water Diver qualifications, as well as the IANTD Deep Diver, IANTD Advanced EANx Diver, IANTD / DAN Oxygen Provider, Diving First Aid, and IANTD Divemaster qualifications.

### **B.** Prerequisites

- 1. Must be qualified as a Sport Diving Instructor in active teaching status with an internationally accredited Scuba association.
- 2. Must be qualified as an Oxygen Provider, AED, CPR and in Diving First Aid, or complete these qualifications in conjunction with the IEC.
- 3. Must be qualified as an Advanced EANx Diver (can be completed during the crossover) with proof of a minimum of 125 logged dives of which at least 25 dives were on EANx.
- 4. Must be a minimum of 18 years of age.

#### C. Program Content

- 1. The IANTD EANx Instructor IEC is a comprehensive evaluation Program conducted by an IANTD EANx Instructor Trainer. This Program normally incorporates three full days.
- 2. Completion of applicable water skills from section H.
- 3. Present at least one lecture from the IANTD *Deep Diver Workbook* and at least one lecture from the *Tek Lite Manual*.
- 4. Demonstrate proficiency in teaching the water skills required in the Deep Diver and Advanced EANx Programs.
- 5. Supervise at least one OW dive in the Deep Diver Training Program and at least one OW dive in Advanced EANx Diver Training Program
- 6. Demonstrate lectures and theory for AED, CPR and Oxygen Provider as well as Diving First Aid Instructor.

### **D. Equipment Requirements**

- 1. IANTD Advanced EANx Diver Student Kit plus Kits related to all other IANTD programs that the Candidate is qualified to teach
- 2. All Equipment Requirements listed in the IANTD Advanced EANx Diver Program are mandatory.

#### E. Program Limits

1. There are no specific limits for this Program.

#### F. Qualification Renewal

- 1. Teach a minimum of 2 IANTD EANx Diver Programs annually, or co-teach 3 IANTD EANx Diver Programs.
- 2. Fulfill all Qualification Renewal requirements stated under IAND, Inc./IANTD Sport Diving Instructor Programs.

### G. Water Skills Development

NOTE: Water skills are required for all Instructors crossing over from other agencies.

- 1. Demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive or by swimming 120 feet (36 meters) underwater in a confined water area.
- 2. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters), and commence gas sharing. While gas sharing, continue to swim for at least 10 minutes while maintaining a swim rate of approximately 75 feet (23 meters) per minute.
- 3. Swim with SCUBA gear on for a distance of at least 1,500 feet (450 meters) in less than 16 minutes.
- 4. Swim with mask, snorkel, and fins for a distance of at least 1,200 feet (365 meters) in less than 10 minutes.
- 5. Swim underwater without surfacing with mask, snorkel, and fins for a distance of at least 100 feet (30 meters).
- 6. Swim without wearing a mask while gas-sharing using an alternate gas source for a distance of at least 100 feet (30 meters).
- 7. Demonstrate teaching OW skills as per IT assignment.

#### Additionally for Advanced EANx Instructor:

- 1. Demonstrate valve shutdown combined with regulator switches in less than 1 minute.
- 2. Deploy a lift bag in less than 1<sup>1</sup>/<sub>2</sub> minute.
- 3. Demonstrate stage tank removal and replacement without a noticeable change in swim pace.
- 4. Demonstrate teaching skills in the Deep Diver Program and the Advanced EANx Diver Program as assigned by IT.
- 5. Demonstrate in water supervision skills of either a Deep Diver or Advanced EANx Diver Program.

Mandatory watermanship evaluations for all Instructor Candidates (80% = passing (80 / 100 points): All Instructor Programs must include the following water skills and physical fitness evaluations, which are in addition to water skills listed above. These evaluations must all be done at one time, with no more than 5 minutes rest period between skills. Repeat these evaluations at each Instructor level, if it has been more than three months since the last evaluation.

#### Skill One (20 points)

Swim for a distance of 1,200 feet (360 meters). Subtract four minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in12 minutes or less, the score would be 20 points).

Points
10
9
8
6
4
2

#### Skill Two (20 points)

Swim 2,400 feet (720 meters) using mask, snorkel and fins (swim with fins only; handicapped divers may use both hands and feet).

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Time (mm:ss) Points	<u>s Time (mm:ss)</u>	Points	Time (mm:ss)	Points	Time (mm:ss)	Points
15 minutes or less 20	16:41 to 17:00	17	18:41 to 19:00	12	20:21 to 20:30	05
15:00 to 15:20 19 ½	<sup>2</sup> 17:01 to 17:20	16 ½	19:01 to 19:20	11	20:31 to 20:40	04
15:21 to 15:40 19	17:21 to 17:40	16	19:21 to 19:40	10	20:41 to 20:50	03
15:41 to 16:00 18 ½	<sup>2</sup> 17:41 to 18:00	15	19:41 to 20:00	08	20:51 to 21:00	02
16:01 to 16:20 18	18:01 to 18:20	14	20:01 to 20:10	07	over 21 minutes	00
16:21 to 16:40 17 <sup>1</sup> / <sub>2</sub>	18:21 to 18:40	13	20:11 to 20:20	06		

 Skill Three (20 points)

 Swim while wearing SCUBA gear on the surface, breathing through a snorkel, for a distance of 800 feet (240 meters). Subtract 3 minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in 11 minutes or less, the score would be 20 points).

 Time (mm:ss)
 Points

 Time (mm:ss)
 Points

 Time (mm:ss)
 Points

lime (mm:ss)	Points	lime (mm:ss)	Points	lime (mm:ss) Poi	nts <u>Time (mm:ss) Poin</u>	its
8 minutes or le	ess 20	9:31 to 9:45	17	10:31 to 10:40	11:21 to 11:30 0!	5
8:01 to 8:20	19 ½	9:46 to 10:00	16	10:41 to 10:50	11:31 to 11:40	4
8:21 to 8:40	19	10:01 to 10:10	15	10:51 to 11:00	10 11:41 to 11:50 02	2
8:41 to 9:00	18 ½	10:11 to 10:20	14	11:01 to 11:10 (	08 11:51 to 12:00 0	1
9:01 to 9:15	18	10:21 to 10:30	13	11:11 to 11:20 (	06 over 12 minutes 00	0
9:16 to 9:30	17 1⁄2					

#### Skill Four (20 points)

Swim while wearing SCUBA gear for a distance of 1,800 feet (540 meters). Subtract one minute from actual time for divers using double tanks (e.g., if performed in 17 minutes or less, the score would be 20 points). Subtract two minutes from actual time for divers using double tanks plus two stage tanks (Trimix Instructor candidate; e.g., if performed in 18 minutes or less, the score would be 20 points)

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
16 minutes or less 20	18:31 to 19:00 17	21:30 to 22:00 14	23:11 to 23:20 08
16:01 to 16:30 19 ½	19:01 to 19:30 16 ½	22:01 to 22:15 13	23:21 to 23:30 06
16:31 to 17:00 19	19:31 to 20:00 16	22:16 to 22:30 12	23:31 to 23:40 04
17:01 to 17:30 18 ½	20:01 to 20:30 15 1/2	22:31 to 22:45 11	23:41 to 23:50 02
17:31 to 18:00 18	20:31 to 21:00 15	22:46 to 23:00 10	23:51 to 24:00 01
18:01 to 18:30 17 ½	21:01 to 21:30 14 1/2	23:01 to 23:10 09	over 24 minutes 00

Skill Five (20 points) Swim for a distance of 50 feet (15 meters), without breathing, and commence gas sharing via alternate second-stage regulator with another diver. While continuing to share gas, swim a distance of 1,200 feet (360 meters). Time for scoring begins when both divers begin swimming while sharing while continuing to share gas, swim a distance of 1,200 feet (360 meters). Time for scoring begins when both divers begin swimming while sharing

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
10:00 or under 20	11:41 to 12:00 17	13:16 to13:30 14	15:21 to 15:30 06
10:01 to 10:20 19 ½	12:01 to 12:15 16 ½	13:31 to 13:45 13	15:31 to 15:40 04
10:21 to 10:40 19	12:16 to 12:30 16	13:46 to 15:00 12	15:41 to 15:50 02
10:41 to 11:00 18 ½	12:31 to 12:45 15 ½	15:01 to 15:10 10	15:51 to 16:00 01
11:01 to 11:20 18	12:46 to 13:00 15	15:11 to 15:20 08	over 16 minutes 00
11:21 to 11:40 17 ½	13:01 to 13:15 14 ½		

# Advanced EANx Instructor Development Program

### A. Purpose

- This Program is designed to train qualified IANTD Divemasters, who are not already Scuba Instructors, to teach IANTD Sport Diving Programs plus IANTD/ DAN Oxygen Provider and IANTD Diving First Aid. These individuals may teach the following IANTD Dive Programs: Snorkel Skin Diver, OW Free Diver, Open Water Diver, OWND, Advanced Open Water Diver, EANx, Deep Diver, Advanced EANx Diver and Divemaster Programs.
- 2. This Program is offered only to IANTD Divers with outstanding experience and knowledge.

### B. Prerequisites

- 1. Must be qualified as an IANTD Divemaster or equivalent.
- Must provide proof of a minimum of 100 logged dives, of which at least 50 were a combination of Deep Diver dives between 90 fsw (27 msw) and 130 fsw (39 msw) and Advanced EANx dives with at least 25 of these dives on EANx or breathing mixtures other than air.
- 3. Must have assisted in at least three courses from one or more of the following IANTD Qualification Programs: Open Water Diver, Advanced Open Water Diver, EANx Diver, Deep Diver, and Advanced EANx Diver prior to being qualified at the Instructor level.
- 4. Must be qualified as an Oxygen Provider, AED, CPR and in Diving First Aid, or complete these qualifications in conjunction with the IEC.
- 5. Must be a minimum of 18 years of age.

### C. Program Content

- 1. A 7-day Program directing the Instructor candidate in the methods and techniques of training IANTD Divers.
- 2. Demonstrate lectures and theory for AED, CPR and Oxygen Provider as well as Diving First Aid Instructor.
- 3. The IDC is staffed by at least one Open Water IT plus one other Advanced Nitrox Instructors.

#### D. Equipment Requirements

- 1. IANTD Advanced EANx Diver Student Kit plus Kits related to all other IANTD programs that the Candidate is qualified to teach.
- 2. IANTD Sport Diving Instructor Kit.
- 3. All Equipment Requirements listed in the IANTD Advanced EANx Diver Program are mandatory.

#### E. Program Limits

1. Same as for the IANTD Advanced EANx Diver Program.

#### F. Qualification Renewal

- 1. Teach a minimum of 2 IANTD EANx Diver Programs annually, or co-teach 3 IANTD EANx Diver Programs.
- 2. Same as for IANTD EANx Instructor Program.

- 1. Complete Watermanship skills from the Advanced EANx crossover program
- 2. To be allowed to teach the OW Free Diver Program must demonstrate ability to free dive to 50 fsw (15 msw) by actually doing a free dive or by swimming 120 feet (36 meters) underwater in a confined water area.
- 3. Remove SCUBA gear and make an ESA, then swim 30 feet (9 meters) from the point of ditching SCUBA. After taking 3 breaths surface dive swim to and don SCUBA gear and manual (either simulated or actual) gas share for a distance of at least 300 feet (90 meters) while maintaining a minimum swim pace of 75 feet (23 meters) per minute.
- 4. Swim on back with full SCUBA gear on for a distance of at least 300 feet (90 meters), then remove SCUBA gear and use it as a front-mounted platform, and swim an additional 300 feet (90 meters).
- 5. Perform valve shutdowns and regulator switches simulating equipment failure in less than 1 minute.
- 6. Deploy a lift bag in less than 1½ minute.
- 7. Demonstrate all skills taught in Deep Diver and Advanced EANx Diver Programs, as well as other OW skills as assigned by the IT.
- 8. Demonstrate proficiency in illustrating and teaching water skills in IANTD Programs as per assignments given by IT.
- 9. Complete all skills as required for Instructor status.

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- 10. Complete OW teaching skills for Deep Diver or Advanced EANx Diver Program on at least one dive, and demonstrate other OW teaching skills on a second dive per assignment given by IT.
- 11. Demonstrate the ability to use malfunctioning equipment as follows: with SCUBA units placed 40 feet (12 meters) apart swim to the first unit which is to have the non-return exhaust valve removed from the second stage. Take at least three breaths from it, swim to the second unit that will have a dislocated diaphragm and take at least three breaths from it. Swim to a third unit which will be adjusted to give a rapid free flow when turned on and breathe from this unit for at least three breaths. If the candidate surfaces before completing all three steps, he or she will be allowed up to three additional attempts.
- 12. Perform a SCUBA bailout.

# Advanced Recreational Trimix Instructor

### A. Purpose

 This Program is designed to allow Instructors to teach Recreational Trimix and Advanced Recreational Trimix, including all other programs an Advanced EANx Instructor may teach. Advanced EANx Instructors who are also Normoxic Trimix Divers or Trimix Divers may teach this program without attending an IDC.

### **B.** Prerequisites

- 1. Must meet all qualifications for Advanced EANx Instructor or equivalent and complete either the Advanced EANx Instructor or Advanced Recreational Trimix instructor crossover or IDC.
- 2. Must provide proof of a minimum of 100 logged dives, of which at least 50 were a combination of Deep Diver dives between 90 fsw (27 msw) and 150 fsw (45 msw) and Advanced EANx dives with at least 25 of these dives on EANx or Trimix mixtures.
- 3. Must be a Qualified Advanced Recreational Trimix Diver or Normoxic Trimix Diver.
- 4. Must have assisted in at least three courses from one or more of the following IANTD Qualification Programs: Open Water Diver, Advanced Open Water Diver, EANx Diver, Deep Diver, and Advanced EANx Diver and Advanced Recreational Trimix Diver prior to being qualified at the Recreational Trimix Instructor level.
- 5. Must be qualified as an Oxygen Provider, AED, CPR and in Diving First Aid, or complete these qualifications in conjunction with the IEC.
- 6. Must be a minimum of 18 years of age.

### C. Program Content

1. Advanced EANX Instructors who are also Normoxic Trimix Divers may teach the Recreational Trimix and Advanced Recreational Trimix Diver program.

#### OR

1. Complete requirements for Advanced EANx Instructor or already be a Advanced EANx Instructor or complete the Advanced Recreational Trimix Instructor IEC.

#### **D. Equipment Requirements**

- 1. All Equipment Requirements listed in the IANTD Advanced Recreational Trimix Diver Program are mandatory.
- 2. IANTD Advanced Recreational Trimix Diver Student Kit.

### E. Program Limits

1. Same as for the IANTD Advanced Recreational Trimix Diver Program.

#### F. Qualification Renewal

1. Teach a minimum of 2 IANTD Recreational Trimix Diver or Advanced EANx Diver Programs annually.

# DPV Instructor (OW / Cave)

### A. Purpose

1. This Program is designed to develop qualified IANTD DPV Instructors.

### **B.** Prerequisites

- 1. Be an IANTD Advanced Nitrox Instructor or IANTD Cave Instructor (if qualifying as DPV Cave Diver).
- 2. Must provide proof of a minimum of 150 logged dives, including at least 40 hours using DPVs. If qualifying as Cave DPV Instructor; candidates must be IANTD Cave Instructors with a minimum of 200 logged cave dives and have taught a minimum of three (3) Cave Diver courses.
- 3. Must be a minimum of 18 years of age.

## C. Program Content

- 1. Complete 100 minutes of bottom time using a DPV, for evaluation by a qualified IANTD Instructor Trainer.
- 2. Complete an IEC evaluation.

### D. Equipment Requirements

- 1. Must own or have unlimited access to a DPV suitable for the environment and the dives being conducted.
- 2. All Equipment requirements as listed in the IANTD Sport Diver programs or if Cave DPV Diver in the IANTD Cave Diver program Standards.

### E. Program Limits

- 1. There may be no more than two (2) DPV Instructor Candidates per Instructor Trainer.
- 2. No dives may be conducted deeper than 130' and/or 1500' of penetration if in the Cave environment.
- 3. Bottom times and any mandatory decompression requirements must be within the candidates' current level of training.

### F. Qualification Renewal

1. Teach a minimum of two (2) IANTD DPV Diver programs annually.

### G. Water Skills Development

1. Demonstrate all skills in IANTD DPV Diver program to demonstration quality.

# Specialty Instructor

#### A. Purpose

These Programs have been designed to enable IANTD instructors to train qualified divers with specialty training in areas such as Nitrox Diver, Underwater Modeling, Underwater Photography, Underwater Videography, Night Diver, Salvage Diver, Wall Diver, Hyperbaric Chamber Operations, Full Face Mask Diver, Surface Supplied Diver, Helicopter Rescue or other specialty training areas.

### B. Prerequisites

- 1. Must be a qualified OW instructor or higher and the specialty must be within the instructor range qualified on
- 2. Must have taught a minimum of 6 IANTD diver programs within the qualification level of the instructor
- 3. Other Prerequisites may apply as per the Program outline approved in writing by the Training Director or person designated Licensee Region's representative.

### C. Program Content

- 1. As per the Program outline that must be approved in writing by the Training Director or designated Licensee Region's representative. Upon approval the instructor will be granted a Specialty Instructor rating designating the particular specialty they are eligible to teach. All Programs must include the appropriate training dives with a minimum of 4 dives unless other wise waived by the Training Director.
- 2. The Instructor must abide by Specialty standards that have been previously approved by IAND Inc. / IANTD and will be sent to the applying Instructor. If a new Specialty is being applied for, the Instructor shall submit in writing for the approval of the Training Director a course outline in the form of a Standard as well as additional information as required.
- 3. Note Each specialty standard will remain on file at IANTD HQ and will not become a part of the published standards.

### **D. Equipment Requirements**

- 1. Equipment used during this Program must be appropriate for the environment and in good working order.
- 2. Additional equipment may be required, as per the Program outline approved in writing by the Training Director or designated Licensee Region's representative.

### E. Program Limits

- 1. No dives may be conducted to depths greater than the qualification level of the instructor or student in the course
- 2. Additional limits may apply, as per the Program outline approved in writing by IAND, Inc. / IANTD World Headquarters, or designated Licensee Region's representative.

- 1. A confined water session must be completed before conducting any OW dives.
- 2. As per the Program outline approved in writing by the Training Director or designated Licensee Region's representative.

# **Underwater Theatrical Performer Instructor**

### A. Purpose

1. This program is designed to train qualified IANTD instructors to the knowledge, understanding and demonstration skills required for the Underwater Theatrical Performer course.

## B. Prerequisites

1. Must be qualified as an IANTD Open Water Instructor in active teaching status.

# C. Program Content

- 1. A 2-day program directing the Instructor Candidate in the specific methods and techniques of training IANTD Underwater Theatrical Performers for Instructors having prior experience working with performers or talent.
- 2. A 3-day program directing the Instructor Candidate in the specific methods and techniques of training IANTD Underwater Theatrical Performers for Instructors having no prior experience working with performers or talent.

# D. Equipment

- 1. All Equipment Requirements listed in the IANTD Underwater Theatrical Performer Program are mandatory.
- 2. IANTD Underwater Theatrical Performer Student Kit.
- 3. Instructor first stage must be equipped with a minimum of one primary second stage and two alternate air sources (one must be on each side to support two students at the same time).
- 4. For Module 2 handrails or pull ropes and air stations are required.

### E. Instructor to Student ratios

- 1. Module one water skills maximum instructor to student ratio is 1:4
- 2. Module two water skills maximum instructor to student ratio is 1:4 with a minimum of 2 instructors from skill teaching to in-water evaluation.

### B. Qualification Renewal

1. Teach a minimum of 2 IANTD Underwater Theatrical Performer courses yearly.

# Public Safety Diver Instructor

### A. Purpose

1. To train instructors to train divers to operate in waters of limited visibility while employing structured methods in the retrieval of submerged evidence and its potential use in a court room.

### **B.** Prerequisites

- 1. Must be a qualified IANTD Advanced Nitrox Instructor.
- 2. Must be a minimum of 21 years of age
- 3. Must be qualified as an Oxygen Provider, AED, CPR and in Diving First Aid, or complete these qualifications in conjunction with the IEC.
- 4. Must have completed 20 logged dives as a PSD diver in operational or training situations.

### C. Program Content

1. 2-4 Day program consisting of the presentation of at least 5 lectures from the PSD course as well as a confined water session and an open water session where the candidate is both conducting and supervising the session.

### D. Equipment Requirements (Instructors must have access to)

- 1. All Equipment Requirements listed in the IANTD Public Safety Diver Program are mandatory.
- 2. IANTD Public Safety Diver Student Kit.
- 3. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.
- 4. All students shall come equipped with two methods of cutting line
- 5. One body recovery system
- 6. Lines and rigging
- 7. Safety harness
- 8. Tether Line
- 9. Dry suit
- 10. Full face mask
- 11. Appropriate environmental protection as set forth by industry standards
- 12. Safety reel and Lift Bag.

### E. Program Limits

- 1. There may be no more than 8 students per Instructor in open water.
- 2. No dives may be conducted to depths greater than 100 fsw (30 msw).
- 3. Appropriate safety stops must be performed and all dives shall be within normal no-decompression limits
- 4. As an industry standard all solo Public Safety Diving shall be accomplished with a diver that is tethered.
- 5. Any equipment used in the open water phase of the course must be trained with in the confined water session of the course.

- 1. Under the direct supervision of a safety diver and while wearing a blacked out mask perform the following:
  - a. Underwater obstacle course consisting of 2 workstations and one impediment efficiently and effectively.
  - b. Demonstrate three of six underwater search methods.

# **Decompression Software Specialist Instructor**

### A. Purpose

1. This Program is designed to develop qualified IANTD Decompression Software Specialist Instructors.

# B. Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Instructor in Active Teaching Status with IANTD.
- 2. Prior to teaching this Program, the Instructor must have successfully completed the Decompression Software Specialist Program.

# C. Program Content

1. Prior to teaching this Program, the Instructor must have successfully completed the Decompression Software Specialist Program.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Decompression software Specialist Diver Program are mandatory.
- 2. IANTD Decompression Software Specialist Diver Student Kit and Instructor Kit.

## E. Program Limits

1. There are no diving activities required for this Program.

### F. Qualification Renewal

- 1. Teach or assist in a minimum of 2 Decompression Software Specialist Programs annually.
- 2. Remain as an active IANTD Instructor and Member.

### G. Water Skills Development

1. There are no specific water skills required for this Program.

# Wreck or Cavern Diver Instructor

#### A. Purpose

1. This Program is designed to develop qualified IANTD Wreck or Cavern Diver Instructors. This Program may be taught in wrecks, caverns, or a combination of both. However, both the Instructor and students must remain in sight of ambient light.

### B. Prerequisites

- 1. Must be qualified as an IANTD EANx Instructor in Active Teaching Status, with proof of a minimum of 150 logged dives.
- 2. Must be qualified as an IANTD Cave and/or Wreck Diver or equivalent (BSAC, NACD, CDAA, NSS/CDS).
- 3. Must provide proof of a minimum of 50 logged dives in either or both cave and wreck penetration diving. The Wreck or Cavern Instructor card will specify which Programs can be taught by the Instructor.
  - a. Instructors experienced in wreck only may teach in the wreck environment.
  - b. Instructors experienced in cave only may teach cavern diving.
  - c. Instructors experienced in both wreck and cave may teach both wreck and cavern diving.
- 4. Must be recommended by an IANTD Wreck or Cavern Instructor, after having assisted in a minimum of at least one Wreck or Cavern Program.
- 5. Must be a minimum of 18 years of age.

#### C. Program Content

- A 2-day Program directing the Instructor candidate to the methods and techniques of training IANTD Wreck or Cavern Divers. NACD, NSS/CDS and CDAA Cavern Instructors who are also IANTD EANX Instructors may cross over by completing a oneday Program acquainting them with IANTD Standards and Procedures.
- 2. The IEC is to be staffed by one Wreck or Cavern IT whichever is appropriate for the program being presented. If the IEC is for qualification in both the evaluators must be qualified in both.
- 3. The candidate must assist in one additional Wreck or Cavern Diver Program, either prior to or during the IEC.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Wreck **OR** Cavern Diver Program are mandatory.
- 2. Candidates will use appropriate equipment for diving into an overhead environment.

#### E. Program Limits

1. Same as for the IANTD Wreck or Cavern Diver Program.

#### F. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Programs annually including at least one IANTD Wreck or Cavern Diver Program in Active Teaching Status.
- 2. Log a minimum of 12 non-teaching cavern or wreck dives annually.

- 1. Swim in a simulated out-of-air situation (without breathing, and exhaling slowly) for a distance of at least 60 feet (18 meters), and commence gas sharing. While gas sharing, continue to swim for a distance of at least 350 feet (105 meters) while maintaining a swim rate of approximately 50 feet (17 meters) per minute.
- 2. Tow another diver for a distance of at least 200 feet (60 meters).
- 3. Simulate a complete rescue. (Activate EMS, remove diver from water with assistance and simulate CPR.).
- 4. Perform fitness test swim in SCUBA gear for a distance of at least 1,000 feet (305 meters) in less than 15 minutes.
- 5. Complete the instructor fitness evaluation in the equipment required for this level of training.
- 6. Deploy a lift bag in less than 1 minute.
- 7. Demonstrate proper reel techniques.
- 8. Supervise at least 2 Wreck or Cavern dives with IT or staff person simulating a student.
- 9. It is recommended that the candidate attempt to find way out of a wreck or Čavern with eyes closed and no line.

# Introductory Cave Instructor

### A. Purpose

 This Program is designed to provide quality training to divers advancing into introductory cave diving. In addition, it serves as a mechanism to further develop overhead teaching experience for Instructors, enabling them to evolve to more competent Cave Instructors. The IANTD Introductory Cave Instructor may teach all levels of the IANTD Sport Diver Programs plus they may assist / supervise an Cave Instructor in Cave / Advanced Cave Diver Programs.

### B. Prerequisites

- 1. Must be qualified as a Cave Diver.
- 2. Must be qualified as an Overhead Environment Instructor in Active Teaching Status, who has taught a minimum of 3 Cavern Diver Programs and has proof of a minimum of 75 logged cave dives.
- 3. Must provide proof of a minimum of 300 logged dives, of which at least 100 dives must be a combination of cavern and technical dives.
- 4. Must be recommended by a Cave Instructor, after having assisted the Instructor in one or more Introductory Cave Diver Programs until the Instructor is confident the student is capable of attending an IEC. The candidate must assist in one complete Introductory Cave Programs.
- 5. Must be a minimum of 21 years of age.

### C. Program Content

- 1. Program duration is a minimum of two days.
- 2. This Program may be conducted by any IANTD Cave Instructor Trainer provided at least one other Cave Instructor is on staff who can evaluate a minimum of one water session and one lecture session each. This other Instructor must have taught a minimum of 4 cave courses, or 6 combined Cave and Introductory Cave courses. If 3 different IANTD Cave Instructors have previously evaluated the candidate, the IEC may be conducted by only one Cave IT.
- 3. Standards and Procedures and business practices must be included in the lecture portion of the IEC.
- 4. The Candidate must present a minimum of three lecture topics and one in-water teaching session, and one line drill session outside of an Introductory Cave Program.
- 5. The candidate must complete a minimum of two evaluation dives plus the skills as defined in the Water Skills Development section of this Program.
- 6. Once accepted into the IEC, in addition to the prerequisite requirements, the candidate must assist and be evaluated as an Instructor in a complete Introductory Cave Program, the evaluator must be someone other than the Instructor who recommended the candidate.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Intro Cave Diver Program are mandatory.
- 2. Full Cave Diving Equipment will be used throughout the IEC and at all times when teaching Introductory Cave Programs.

### E. Program Limits

1. Same as for the IANTD Introductory Cave Program, except the 2 evaluation dives may be performed as full cave dives.

### F. Qualification Renewal

1. Teach a minimum of 1 IANTD Introductory Cave Diver Program annually plus 1 IANTD Cavern Diver Program annually plus meet the teaching requirements for IANTD Advanced EANx Instructor in Active Teaching Status.

- 1. With one buddy 50 feet (15 meters) away in confined water without a mask, follow a line until buddies meet make touch contact and follow the line as a pair. At the ITs signal, one diver will simulate gas failure and communicate to the buddy a need to share gas. Gas sharing will continue until circuit is complete. At some time during this circuit while gas sharing, a line entanglement exercise will be performed.
- 2. On a cave dive, at the ITs signal, simulate an out of gas situation and share gas for a distance of at least 200 feet (60 meters), then continue for another 100 feet (30 meters) blacked out along the line.
- 3. Respond to gas shutdowns by the IT switching to alternate regulator and then turning the primary gas supply back on. Upon completion return to the primary regulator.
- 4. Swim a distance of at least 800 feet (240 meters) in full equipment in less than 12 minutes.
- 5. Simulate accident management procedures as assigned by the IT.
- 6. Demonstrate teaching proficiency of skills taught in the Introductory Cave Program.
- 7. Assist in one complete Introductory Cave Diver Program prior to, during, or following the IEC.
- 8. Complete the instructor fitness evaluation in the equipment required for this level of training.

# Semi Closed Circuit Rebreather Instructor (SCR)

### G. Purpose

1. This Program is designed to develop qualified IANTD SCR Instructors.

### H. Prerequisites

- 1. Be an IANTD OW Instructor qualified to teach the IANTD EANx program or equivalent.
- Must provide proof of a minimum of 110 logged dives, including at least 20 hours on the SCR on which they want to be qualified as an SCR Instructor. Candidates already qualified as instructors on other SCR or CCR units may crossover after logging at least 5 hours of dive time on another SCR.
- 3. Must be a minimum of 18 years of age.

### I. Program Content

- 1. Must assist in at least one complete SCR Program as part of the IEC.
- 2. Complete an IEC evaluation.

### J. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD SCR Rebreather-specific Diver Program are mandatory.
- 2. IANTD SCR Rebreather-specific Diver Student Kit.
- 3. Must own or have unlimited access to a SCR.

### K. Program Limits

1. Same as for the IANTD SCR Diver Program.

### L. Qualification Renewal

1. Same as for the IANTD OW Instructor Program, plus at least SCR Diver Program must be on the specific SCR on which one is an instructor on.

- 1. Demonstrate all skills in IANTD SCR Diver Program.
- 2. Assist in at least one complete IANTD SCR Diver Program.
- 3. Complete the instructor fitness evaluation while using the SCR.
- 4. Complete all Water skills listed under the SCR Diver Program.

### NOTE: The following rules apply to IANTD Technical Instructor status.

### A. Purpose

1. These Programs are designed to develop qualified IANTD Technical Diving Instructors.

### B. Texts

- 1. All IANTD courses require Student Kits to certify divers. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD Instructor or Diver program name" followed by the words Instructor or Diver Kit.
- 2. IANTD Power Point Slides for any/all IANTD Programs being taught.

### C. Teaching Prerequisites

- 1. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.
- 2. Must be qualified as an Oxygen Provider, AED, CPR and in Diving First Aid.
- 3. Be an IANTD Member and remit annual Instructor Member fees.

## D. Program Limits

- 1. All technical qualifications (Technical Diver, Cave, Wreck, Rebreather, and Trimix) must be issued through IAND, Inc./IANTD. Other agencies may also be awarded as a dual qualification but may not be taught instead of IANTD if it is advertised as an IANTD Program, and is to be covered by IANTD Insurance.
- Instructors advertising IANTD Programs but qualifying students through a different OW, EANx or Technical Diving qualification Program <u>instead</u> of IANTD will be suspended from IANTD teaching status.
- 3. Instructors teaching Cave Diver Programs are encouraged to qualify through the regional / national cave agencies (NACD, NSS/CDS, CDAA, etc.) in addition to IANTD.
- 4. On all dives, the IANTD Dive Tables must be used as either the primary decompression management or as a backup to a dive computer or custom software program or other tables approved by the IANTD BOD.

NOTE: IANTD Normoxic Trimix and Trimix Rebreather Instructors who are qualified as Rebreather Dive Supervisors (or higher) may teach all OC Technical Diving courses up to the level of their rebreather qualification ratings while using the rebreather on which they are diver level (or higher) qualified. The Instructor is required to carry sufficient bailout. To teach a student who is using a rebreather in an IANTD Normoxic Trimix or Trimix Rebreather Diver course, the Instructor must be an IANTD Normoxic or Trimix Rebreather Instructor and must be familiar with the electronics and idiosyncrasies of same type rebreather that the student is using. To teach a student who is using a rebreather that the electronics and idiosyncrasies of the same type rebreather that the student is using. Rebreathers may only be used within their manufacturer's stated limits.

# **Technical Instructor**

### A. Purpose

- 1. This Program is designed to provide a more in-depth knowledge of EANx, Oxygen, and of technical diving applications.
- 2. Technical Instructors are charged with teaching divers to use custom blends of EANx for bottom mix, travel mixes and decompression mixes.
- 3. Technical Instructors may teach Open Water Diver through Technical Diver.
- 4. Technical Cave, Technical Wreck and Technical Rebreather Instructors are Technical Instructors with the additional ability to teach those specialized areas.

### B. Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Instructor in Active Teaching Status, and IANTD Technical Diver or equivalent.
- 2. Must have taught a minimum of 3 Open Water, 3 Advanced Open Water, 3 EANx, and 3 Advanced EANx Diver Programs
- 3. Must have a minimum of two years of teaching experience.
- 4. Must have assisted in one course or do so as part of the IEC.
- 5. Must provide proof of a minimum of 350 logged dives, of which at least 100 were deeper than 130 fsw (39 msw) and at least 30 were on EANx or breathing mixtures other than air (includes decompression mixes)
- 6. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A 3-day Program directing the Instructor candidate to the methods and techniques of training IANTD Technical Diver, plus assist in a complete Technical Diver course either prior to or as apart of the IEC. The candidate must demonstrate good leadership potential during the IEC and give at least two complete lectures in the Program.
- 2. The IEC will be staffed by a Technical IT and one other Technical Instructor (who has taught a minimum of 3 Technical Diver Programs) acting as an evaluator, who must evaluate a minimum of one lecture and one in-water session OR, if the candidate has been evaluated by at least one other IANTD Technical Instructor prior to the IEC it may be conducted by one Technical IT.

### D. Equipment Requirements

- 1. IANTD Technical Diver Student Kit.
- 2. All Equipment Requirements listed in the IANTD Technical Diver Program, except double tanks are mandatory.
- 3. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 4 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).

#### F. Qualification Renewal

- 1. Teach a minimum of 3 IANTD Programs including one IANTD Technical Diver Program annually in Active Teaching Status.
- 2. Remain as an active IANTD member, pay annual Instructor renewal fees, publish a technical paper or assist in an IANTD Instructor IEC.
- 3. Log at least 20 non-teaching Technical, Normoxic Trimix, cave or wreck dives using EANx or oxygen decompression annually.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Remove stage cylinder while swimming and replace it without a noticeable change in swim pace.
- 2. Supervise a dive with an Instructor Trainer acting as a student.
- 3. Assist on at least 6 dives in the Technical Diver Program.
- 4. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Technical Diver Program, as assigned by the Instructor Trainer.
- 5. Complete Mandatory Watermanship Evaluation.

#### Revision Date 12/1/2006 Mandatory Watermanship Evaluations (80 %= passing (72 / 90 points)

#### Skill One (20 points)

Swim for a distance of 3,000 feet (900 meters) while wearing SCUBA gear configured as double cylinders with one stage cylinder.)

Time (mm:ss) Poir	nts <u>Time (mm:ss)</u>	Points	Time (mm:ss)	Points	Time (mm:ss)	Points
25:30 or less 2	29:01 to 29:20	14	31:41 to 32:00	09	32:41 to 32:50	04
25:31 to 26: 00 1	9 29:21 to 29:40	13	32:01 to 32:10	08	32:51 to 33:00	03
27:01 to 27:30 1	8 29:41 to 30:00	12	32:11 to 32:20	07	33:01 to 33:30	02
27:31 to 28:00 1	7 30:01 to 30:20	11	32:21 to 32:30	06	33:31 to 34:00	01
28:01 to 28:30 1	6 30:21 to 31:4	0 10	32:31 to 32:4	0 05	over 34 minutes	s 00
28:31 to 29:00 1	5					
OLULT (00 L.	•					

#### Skill Two (20 points)

Swim for a distance of 2,400 feet (720 meters) wearing mask, snorkel, and fins.)

Time (mm:ss) P	<u>oints</u>	Time (mm:ss)	Points	Time (mm:ss)	Points	Time (mm:ss)	Points
17:30 or less	20	20:01 to 20:20	14	21:41 to 22:05	09	23:21 to 23:30	04
17:31 to 18: 00	19	20:21 to 20:40	13	22:06 to 22:30	08	23:31 to 23:40	03
18:01 to 18:30	18	20:41 to 21:00	12	22:31 to 22:45	07	23:41 to 23:50	02
18:31 to 19:00	17	21:01 to 21:20	11	23:00 to 23:10	06	23:51 to 24:00	01
18:01 to 19:30	16	21:21 to 21:40	10	23:11 to 23:20	05	over 24 minutes	s 00
19:31 to 20:00	15						

#### Skill Three (20 points)

Swim for a distance of 60 feet (18 meters), without breathing, and commence gas sharing via long-hose second-stage regulator with another diver. While continuing to share gas, swim a distance of 800 feet (240 meters). Time for scoring begins when both divers begin swimming while sharing gas. Subtract 5 points for each failed attempt by the diver to complete the 60-foot swim.

<u>Time (mm:ss)</u>	Points	Time (mm:ss)	Points	<u>Time (mm:ss)</u> F	Points
08 minutes or le	ess20	09:31 to 9:40	14	10:21 to 10:30	06
08:01 to 8:15	19 1⁄2	09:41 to 9:50	13	10:31 to 10:40	04
08:16 to 8:30	19	09:51 to 10:00	12	10:41 to 10:50	02
08:31 to 8:45	18 1⁄2	10:01 to 10:10	10	10:51 to 11:00	01
08:46 to 9:00	18	10:11 to 10:20	08	over 11 minutes	00
09:01 to 9:10	17				

#### Skill Four (5 points)

Switch from primary regulator to secondary regulator, then switch back to primary regulator and turn valve for secondary regulator back on.

Time (mm:ss) Points

45 seconds or less 5 0:46 to 1:15 4 3 1:16 to 1:45 1:46 to 2:00 2 2:01 to 2:15 1 0 over 2:15

#### Skill Five (5 points)

Deploy lift bag.	Time (mm:ss)	Points
Deploy int bug.	45 seconds or	less 5
	0:46 to 1:15	4
	1:16 to 1:45	3
	1:46 to 2:00	2
	2:01 to 2:15	1
	over 2.15	0

Skill Six (20 points) Tow a diver for a distance of 200 feet (60 meters) on the surface while simulating rescue breathing, then simulate actions for activation of the EMS procedure and remove victim's equipment. Fifteen points are for overall procedure and technique, scored per IT evaluation. Five additional points are to be directed at removal of the victim's equipment scored as follows: ts

Time (mm:ss) P	Point
3 minutes or less	5
3:01 to 3:30	4
3:31 to 4:00	3
4:01 to 4:30	2
4:31 to 5:00	1
over 5 minutes	0

# **Closed Circuit Rebreather Instructor (CCR)**

### A. Purpose

1. This Program is designed to develop qualified IANTD CCR Instructors.

### **B.** Prerequisites

- 1. Must be a qualified IANTD Advanced EANx Instructor, or take the IEC with the CCR IEC.
- 2. Must be a qualified CCR Diver.
- 3. Must provide proof of a minimum of 150 logged dives, of which at least 100 were using either a SCR or CCR, and at least 100 dives including 100 hours of run-time were on the CCR on which they are becoming an instructor. If the candidate is already a instructor on another CCR they may crossover immediately following the diver course provided they are competent in use of, demonstration of and are proficient on the CCR as demonstrated to an Instructor on the CCR.
  - a. CCR Instructors crossover over from one CCR to another CCR may complete a crossover at the highest level of CCR instructor qualification they have attained (does not apply to IT status).
  - b. CCR Instructor candidates who are OC Normoxic Trimix Instructors and Trimix Divers on CCR may complete the CCR Normoxic Trimix instructor course at the same time as the CCR Instructor provided they have 25 Trimix dives on CCR.
- 4. Minimum of 21 years of age.

### C. Program Content

- 1. Must assist in at least one complete CCR Program in conjunction with the IEC.
  - a. CCR Instructors crossing over to a new CCR at their highest qualification on another CCR at the Normoxic or Trimix level must assist with an IEC at both the diver and highest level.
- 2. Complete an IEC evaluation.

### **D. Equipment Requirements**

- 1. All Equipment Requirements listed in the IANTD CCR-specific Diver Program are mandatory.
- 2. IANTD CCR-specific Diver Student Kit.
- 3. Must own or have unlimited access to the CCR to become an instructor on.

### E. Program Limits

1. Same as for the IANTD CCR Diver Program.

### F. Qualification Renewal

1. Must complete requirements for Advanced EANx Instructor renewal plus teach at least one qualification program on the specific CCR on which they are an instructor.

- 1. Demonstrate all skills in IANTD Rebreather Diver Program.
- 2. Assist in at least one complete IANTD Rebreather Diver Program.
- 3. Complete the instructor fitness evaluation while using the CCR.
- 4. Complete all Water skills listed under the Rebreather Diver Standards in Sport Diver Programs.

### A. Purpose

 This Program is designed to develop competent Instructors for teaching the safe usage of EANx mixtures while cave diving. The Technical Cave Instructor may teach all IANTD Sport and Technical Programs up through IANTD Technical Diver, IANTD Cave Diver and IANTD Technical Cave Diver.

# B. Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Instructor in Active Teaching Status and qualified as an IANTD Technical Diver and IANTD Cave Diver or IANTD Technical Cave Diver or equivalent.
- 2. Must have taught a minimum of 3 of each IANTD Open Water (Nitrox) and IANTD Advanced Open Water Programs with any qualification agency, plus at least 3 IANTD EANx Diver, 2 IANTD Advanced EANx and 2 IANTD Deep Diver Programs.
- 3. Must provide proof of a minimum of 150 logged cave dives.
- 4. Must have worked with and been evaluated by a cave Instructor in at least two cave courses.
- 5. Must be a minimum of 21 years of age.

#### OR

- 1. Must be a qualified Introductory Cave Instructor.
- 2. Must have taught a minimum of 3 IANTD Introductory Cave Diver Programs.
- 3. Must provide proof of a minimum of 350 logged dives, of which at least 150 were technical dives (Cave, Wreck Penetration, Technical Diver, Normoxic Trimix, Trimix, etc.) and at least 100 were Cave Dives.
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD Technical Cave Divers. Candidates already qualified as Technical Instructors may have the Technical portion of the IEC waived. If the course is to be conducted in conjunction with a Cave Diver Program as part of the IEC, additional time will be added to the course to complete all the IEC specific details and evaluations of watermanship. This is an average of 2 more days of testing and evaluation.
- 2. NACD, NSS/CDS and CDAA, etc. Cave Instructors who are IANTD Technical Instructors already may crossover by attending a two day Program with an IANTD Cave IT acquainting them with IANTD Standards and Procedures on one day and observing them in an in-water teaching situation on an actual cave dive.
- 3. NACD, NSS/CDS and CDAA, etc. Instructors who are not Technical Instructors may crossover by completing a Technical IEC.
- 4. The IEC will be directed by an IANTD Cave IT and one IANTD Cave Instructor. It is recommended that 2 evaluators in addition to the IT be used, who must have taught a minimum of 5 full cave courses. The evaluator must be present for at least 4 days of the IEC, the decision to or not to qualify the candidate will be based on the decision of the staff members.

#### OR

- 1. If the candidate has been evaluated satisfactorily by 3 different IANTD Technical Cave Instructors the IEC may then be conducted by one Technical Cave IT.
- 2. Instructors previously qualified as Introductory Cave Instructor may teach Full Cave upon completion of the IEC.
- 3. Instructors not previously qualified as Introductory Cave Instructors must teach two Introductory Cave Programs or assist in one additional Full Cave Program prior to teaching Cave Diver Programs.
- 4. Upon qualification the Technical Cave Instructor is qualified to teach cave and Technical Diver Programs.

### D. Equipment Requirements

- 1. IANTD Technical Cave Diver Student Kit.
- 2. All Equipment Requirements listed in the IANTD Cave Diver Program are mandatory.
- 3. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).

### F. Qualification Requirements

- 1. Completion of the IANTD Technical Cave Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Technical Cave Instructor.
- 2. IANTD Technical Cave Instructors may find it beneficial to teach a modular system in cave diving (Overhead Environment, Introductory Cave, and Full Cave).
- 3. IANTD Cave Instructors are encouraged to become dual qualified with other agencies i.e. NACD, NSS/CDS, CDAA, etc.

### G. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Technical Diver Programs annually, or co-teach a minimum of 3 IANTD Technical Diver Programs, including at least one IANTD EANx Cave Diver Program.
- 2. Remain as an active IANTD member and remit annual Instructor renewal fees.
- 3. Log at least 25 Overhead Environment dives annually, with a minimum of 20 non-teaching Cave dives.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Complete the Watermanship Skills Evaluation and all water skills listed in the Water Skills Development section of the Technical Diver Instructor Program.
- 2. Perform at least 2 evaluation dives with the IT acting as a student.
- 3. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Cave Diver Programs, as assigned by the Instructor Trainer.
- 4. Assist in at least one complete Cave Diver Program (in addition to the Prerequisite assistance) prior to, during or following the IEC.

# CCR Cave Diver Instructor

### A. Purpose

1. This Program is designed to develop competent Instructors for teaching the safe usage of CCR while cave diving. The CCR Cave Instructor may teach all IANTD Sport and Technical Programs up through IANTD Technical Diver, IANTD Cave Diver and IANTD CCR Cave Diver.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD CCR Instructor in Active Teaching Status and qualified as an IANTD IANTD CCR Cave Diver.
- 2. Must have taught a minimum of 3 of each 3 IANTD CCR Diver Programs.
- 3. Must provide proof of a minimum of 200 dives and 150 logged cave dives.of which 50 must have been on CCR
- 4. Must have worked with and been evaluated by a cave Instructor in at least two cave courses. One of which can be in conjunction with the IEC
- 5. Must be a minimum of 21 years of age.

#### OR

- 1. Must be a qualified Technical Cave instructor and CCR Instructor
- 2. Must have taught a minimum of 3 IANTD Cave or Technical Cave Diver Programs.
- 3. Must provide proof of a minimum of 20 CCR Cave Dives and complete a crossover evaluation by a CCR Cave IT
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD CCR Cave Divers. If the course is to be conducted in conjunction with a Cave Diver Program as part of the IEC, additional time will be added to the course to complete all the IEC specific details and evaluations of watermanship. This is an average of 2 more days of testing and evaluation.
- NACD, NSS/CDS and CDAA, etc. Cave Instructors who are IANTD CCR Instructors already may crossover by attending a two day Program with an IANTD Cave IT acquainting them with IANTD Standards and Procedures on one day and observing them in an in-water teaching situation on an actual cave dive.
- 3. The IEC will be directed by an IANTD Cave IT and one IANTD Cave Instructor. It is recommended that 2 evaluators in addition to the IT be used, who must have taught a minimum of 5 full cave courses. The evaluator must be present for at least 4 days of the IEC, the decision to or not to qualify the candidate will be based on the decision of the staff members.

#### OR

- 1. If the candidate has been evaluated satisfactorily by 3 different IANTD CCR Cave Instructors the IEC may then be conducted by one Technical Cave IT..
- 2. Upon qualification the CCR Cave Instructor is qualified to teach CCR cave Diver Programs.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD CCR Cave Diver Program.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw), Unless the candidate is also a CCR Normoxic Trimix instructor or higher in which case dives may be made to the depth qualification of the candidate, if conditions warrant it.

### F. Qualification Requirements

1. Completion of the IANTD CCR Cave Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD CCRI Cave Instructor.

### G. Qualification Renewal

1. Teach a minimum of 2 IANTD CCR Diver Programs annually, or co-teach a minimum of 3 IANTD Technical level Diver Programs, including at least one IANTD CCR Cave Diver Program.

- 2. Remain as an active IANTD member and remit annual Instructor renewal fees.
- 3. Log at least 25 Overhead Environment dives annually, with a minimum of 20 non-teaching Cave dives.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Complete the Watermanship Skills Evaluation and all water skills listed in the Water Skills Development section of the Technical Diver Instructor Program unless already qualified as a Normoxic CCR Instructor or OC Technical instructor
- 2. Perform at least 2 evaluation dives with the IT acting as a student.
- 3. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Cave Diver Programs, as assigned by the Instructor Trainer.
- 4. Assist in at least one complete Cave Diver Program (in addition to the Prerequisite assistance) prior to, during or following the IEC.

# **Technical Wreck Diver Instructor**

### A. Purpose

1. This Program is designed to provide responsible training of high-quality Wreck Penetration Instructors. The Technical Wreck Instructor may teach all IANTD Sport Diver Programs as well as IANTD Technical Diver.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD Wreck Diver Instructor in Active Teaching Status, and IANTD Technical Wreck Diver Supervisor.
- 2. Must provide proof of a minimum of 350 logged dives, of which at least 150 were technical dives. A minimum of 100 of these dives must have been a combination of cave and wreck penetration, at least 50 of which were wreck penetration dives.
- 3. Must have taught a minimum of 3 Wreck Diver Programs.
- 4. Must be a minimum of 21 years of age.

# C. Program Content

- 1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD Technical Wreck Divers.
- 2. The IEC is staffed by a Wreck IT plus one evaluator who must be a Wreck Instructor; **OR**, if the candidate has been evaluated by a different IANTD Technical Wreck Instructor prior to the IEC, the IEC may be conducted by one Technical Wreck IT.
- 3. Must assist in at least one complete Wreck Diver Program prior to or during the IEC.
- 4. Complete lecture and in water teaching assignments as assigned by the IT.

# D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Technical Wreck Diver Program are mandatory.
- 2. Oxygen analyzer.

## E. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).

## F. Qualification Requirements

1. Completion of the IANTD Technical Wreck Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Technical Wreck Instructor.

### G. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Technical Diver Programs annually, or co-teach a minimum of 3 IANTD Technical Diver Programs, including at least one IANTD Wreck Diver Program.
- 2. Remain as an active IANTD member and pay annual Instructor renewal fees.
- 3. Log at least 25 Overhead Environment dives annually, with a minimum of 12 non-teaching Wreck Penetration dives.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Complete then Watermanship Skills Evaluation and all water skills listed in the Water Skills Development section of the Technical Diver Instructor Program.
- 2. Perform at least 2 evaluation dives with the IT acting as a student.
- 3. Demonstrate proficiency teaching and demonstrating the skills and techniques required in the Wreck Diver Program, as assigned by the Instructor Trainer.
- 4. Assist in at least one complete Wreck Diver Program prior to, during or following the IEC.
- 5. Complete the instructor fitness evaluation while using the equipment required for this level of training.

# Normoxic Trimix Instructor

### A. Purpose

- 1. This Program is designed to provide a more in-depth knowledge of Normoxic Trimix Diving.
- 2. Normoxic Trimix Instructors may teach Open Water Diver through Normoxic Trimix Diver.

### **B.** Prerequisites

- 1. Must assist in at least one Normoxic Trimix Diver Program. This may be prior to or during the IEC.
- 2. For rebreathers the course must have been on rebreathers.
- 3. Must be qualified as an IANTD Advanced EANx Instructor in Active Teaching Status, and IANTD Trimix Diver or equivalent.
- 4. Must have taught a minimum of 3 Open Water, 3 Advanced Open Water, 3 EANx, and 3 Advanced EANx Diver Programs
- 5. Must have a minimum of two years of teaching experience.
- 6. Must provide proof of a minimum of 350 logged dives, of which at least 100 were deeper than 130 fsw (39 msw) and at least 25 were on Normoxic Trimix or Trimix.
- 7. Must be a minimum of 21 years of age. If upgrading from Technical Instructor to Normoxic Trimix Instructor on OC:
- 8. Must provide proof of a minimum of 350 logged dives, of which at least 150 were deeper than 130 fsw (39 msw) and at least 25 were on Trimix. (This is purely administrative and no course needs to transpire.)

### C. Program Content

- 1. A 3-day Program directing the Instructor candidate to the methods and techniques of training IANTD Normoxic Trimix. Diver, plus assist in a complete Normoxic Trimix. Divers course either prior to or as a part of the IEC. The candidate must demonstrate good leadership potential during this course and give at least two complete lectures in the Program.
- 2. The IEC will be staffed by a Normoxic Trimix IT.
- 3. As an Instructor Upgrade Program from Technical Instructor the candidate must assist in a complete Normoxic Trimix Diver course as a part of the Instructor upgrade from Technical Instructor to Normoxic Trimix Instructor.

NOTE: This is not an IEC program. The candidate must demonstrate good leadership potential during this course and give at least two complete lectures in the Program.

4. The up grade Program will be staffed by one Trimix Instructor, who has taught a minimum of 3 Normoxic Trimix Diver Programs. For Normoxic Rebreather Trimix Instructor, a Trimix Rebreather Instructor must staff the program.

### **D. Equipment Requirements**

- 1. IANTD Normoxic Trimix Diver Student Kit.
- 2. All Equipment Requirements listed in the IANTD Normoxic Trimix Diver Program are mandatory.
- 3. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 4 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 200 fsw (60 msw) on OC.

### F. Qualification Renewal

- 1. Teach a minimum of 4 IANTD Programs including one IANTD Normoxic Trimix Diver Program annually in Active Teaching Status.
- 2. Remain as an active IANTD member, pay annual Instructor renewal fees, publish or assist in an IANTD Instructor IEC.
- 3. Log at least 20 non-teaching Normoxic Trimix, cave or wreck dives using EANx or oxygen decompression annually.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Supervise 3 dives in a Normoxic Trimix Diver Program under the direction of a Trimix Instructor.
- 2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Normoxic Trimix Diver Program.
- 3. Complete Water skills evaluation from the Technical Instructor program unless already documented in a previous program within the technical level. This is up to the ITs discretion.

# **CCR Normoxic Trimix Instructor**

### A. Purpose

- 1. This Program is designed to provide a more in-depth knowledge of CCR Normoxic Trimix Diving.
- 2. Normoxic Trimix Instructors may teach Open Water Diver through CCR Normoxic Trimix Diver.

### **B.** Prerequisites

- 1. Must assist in at least one CCR Normoxic Trimix Diver Program. This may be prior to or during the IEC.
- 2. Must be qualified as an IANTD CCR Instructor in Active Teaching Status, and IANTD Trimix Diver or equivalent.
- 3. Must have taught a minimum of 3 Open Water, 3 Advanced Open Water, 3 EANx, and 3 Advanced EANx Diver Programs
- 4. Must have a minimum of two years of teaching experience.
- 5. Must provide proof of a minimum of 350 logged dives, of which at least 100 were deeper than 130 fsw (39 msw) and at least 25 were on Normoxic Trimix or Trimix.
- 6. Must be a minimum of 21 years of age.

# C. Program Content

- 1. A 3-day Program directing the Instructor candidate to the methods and techniques of training IANTD CCR Normoxic Trimix. Diver, plus assist in a complete Normoxic Trimix. Divers course either prior to or as a part of the IEC. The candidate must demonstrate good leadership potential during this course and give at least two complete lectures in the Program.
- 2. The IEC will be staffed by a CCR Normoxic Trimix IT.
- 3. As an Instructor upgrade Program from Technical Instructor the candidate must assist in a complete Normoxic Trimix Diver course as a part of the Instructor upgrade from Technical Instructor to Normoxic Trimix Instructor.

# NOTE: This is not an IEC program. The candidate must demonstrate good leadership potential during this course and give at least two complete lectures in the Program.

4. The up grade Program will be staffed by one Trimix Instructor, who has taught a minimum of 3 Normoxic Trimix Diver Programs. For Normoxic Rebreather Trimix Instructor, a Trimix Rebreather Instructor must staff the program.

## D. Equipment Requirements

- 1. IANTD CCR Normoxic Trimix Diver Student Kit.
- 2. All Equipment Requirements listed in the IANTD Normoxic Trimix Diver Program are mandatory.
- 3. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 4 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 200 fsw (60 msw) on OC.

### F. Qualification Renewal

- 1. Teach a minimum of 4 IANTD Programs including one IANTD Normoxic Trimix Diver Program annually in Active Teaching Status.
- 2. Remain as an active IANTD member, pay annual Instructor renewal fees, publish a technical paper or assist in an IANTD Instructor IEC.
- 3. Log at least 20 non-teaching Normoxic Trimix, cave or wreck dives using EANx or oxygen decompression annually.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Supervise 3 dives in a Normoxic Trimix Diver Program under the direction of a Trimix Instructor.
- 2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in CCR Normoxic Trimix Diver Program as assigned by the Trimix Instructor.
- 3. Complete Water skills evaluation from the Technical Instructor program unless already documented in a previous program within the technical level. This is up to the ITs discretion.

# **Trimix Instructor**

### A. Purpose

- 1. This Program is designed as the model for mixed gas instruction. The Program was developed by leading diving educators, diving physiologists and the most experienced mixed gas divers in the technical diving community.
- 2. The IANTD Trimix Instructor represents the standard of excellence in Mixed Gas Applications for advanced recreational diving.

### B. Prerequisites

- 1. Must be qualified as an IANTD Normoxic Trimix Instructor in Active Teaching Status for a minimum of 1 year with five years of teaching experience,
- 2. Must provide proof of a minimum of 500 logged dives, of which at least 200 were deeper than 100 fsw (30 msw), and at least 50 were Trimix dives.
- 3. Must have taught a minimum of 4 IANTD EANx Diver Programs, 4 IANTD Advanced EANx Programs, and either 4 IANTD Technical Diver Programs, or Normoxic Trimix Diver programs or 4 of a combination of the two programs.
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A 4 day Program consisting of instructor procedures, watermanship evaluations, and must assist with a complete Trimix Diver Program either prior to or as a part of the IEC. This IEC is dedicated to directing the Instructor candidate to the methods and techniques of training IANTD Trimix Divers.
- 2. The IANTD Trimix Instructor IEC is staffed by an IANTD Trimix Instructor Trainer and one IANTD Trimix Instructor; **OR**, if the candidate has been evaluated by a different IANTD Trimix Instructor, the IEC may be conducted by one Trimix IT.
- 3. Must assist in one complete Trimix Diver Program either prior to or as part of the IEC.

### D. Equipment Requirements

- 1. IANTD Trimix Diver Student Kit.
- 2. All Equipment Requirements listed in the Trimix Diver Program are mandatory.
- 3. Oxygen analyzer.

### F. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer on dives deeper than 200 fsw (60 msw).
- 2. No dives may be conducted to depths greater than 300 fsw (90 msw).

#### G. Qualification Requirements

1. Completion of the IANTD Trimix Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Trimix Instructor.

#### G. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Technical Diver Programs annually, including one IANTD Trimix Diver Program.
- 2. Remain as an active IANTD member and pay annual Instructor renewal fees.
- 3. Log at least 10 non-teaching Trimix or Heliox dives annually.
- 4. Present or publish a paper, or assist in either an IANTD EANx or IANTD Trimix IEC, or be an active member on an approved special projects committee.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Supervise at least one Trimix dive.
- 2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Trimix Diver Program, as assigned by the Instructor Trainer.
- 3. Perform valve shutdowns in less than 45 seconds.
- 4. Complete Water skills evaluation from the Technical Instructor program unless already documented in a previous program within the technical level. This is up to the ITs discretion.

# Mandatory Watermanship Evaluation (80% = passing (68 / 85 points)).

#### Skill One (25 points)

Swim for a distance of 60 feet (18 meters), without breathing, and commence gas sharing via long-hose second-stage regulator with another diver. While continuing to share gas, swim a distance of 800 feet (240 meters). Time for scoring begins when both divers begin swimming while sharing gas. Subtract 5 points for each failed attempt by the diver to complete the 60-foot swim.

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
8 minutes or less 25	09:31 to 9:40 19	10:21 to 10:30 11
08:01 to 8:15 24	09:41 to 9:50 18	10:31 to 10:40 08
08:16 to 8:30 23	09:51 to 10:00 17	10:41 to 10:50 04
08:31 to 8:45 22	10:01 to 10:10 15	10:51 to 11:00 01
08:46 to 9:00 21	10:11 to 10:20 13	over 11 minutes 00
09:01 to 9:10 20		

#### Skill Two (20 points)

Swim for a distance of 2,000 feet (600 meters) while wearing SCUBA gear configured as double cylinders with two stage cylinders.

Time (mm:ss) P	Points	Time (mm:ss) F	Points	Time (mm:ss)	Points	Time (mm:ss)	Points
19:30 or less	20	22:01 to 22:10	14	22:51 to 23:00	09	23:21 to 23:25	04
19:31 to 20:00	19	22:11 to 22:20	13	23:01 to 23:05	08	23:26 to 23:30	03
20:01 to 20:30	18	22:21 to 22:30	12	23:06 to 23:10	07	23:31 to 23:40	02
20:31 to 21:00	17	22:31 to 22:40	11	23:11 to 23:15	06	23:41 to 24:00	01
21:01 to 21:30	16	22:41 to 22:50	10	23:16 to 23:20	05	over 24 minutes	s 00
21:31 to 22:00	15						

#### Skill Three (10 points)

Swim for a distance of 50 feet (15 meters), drop one stage cylinder, swim an additional 50 feet (15 meters), and drop the second stage cylinder, all with a minimum of change in swim pace. Swim 50 feet (15 meters) and recover the cylinders in reverse order, while maintaining the swim rate.

Performance	Points
Skill complete in less than 3 minutes with good technique and no slowing of swim pace.	10
Candidate slows pace during drop or retrieval of stages, or technique is sloppy, completed in less than3 minutes.	9
Candidate stops during either the drop, or skill is completed in less than 3 ½ minutes.	6
Candidate stops during both the drop, and skill completed in less than 4 minutes.	4
Skill completed in more than 4 minutes, but less than 5 minutes.	2
Skill completion in more than 5 minutes.	1
Skill not completed.	0

#### Skill Four (10 points)

For the first phase of this skill, tow a diver for a distance of 200 feet (60 meters) on the surface in full gear consisting of double cylinders and two stage cylinders, simulating rescue breathing, then simulate actions for activation of the EMS procedure. Ten points are given for perfect technique and use of EMS procedures, and points are subtracted at the ITs discretion from the possible 10 for this portion of the rescue based on subjective evaluation of technique and understanding of the EMS procedures. For the second phase of this skill, remove the victim's equipment and prepare for exiting the water. Score according to timetable below. For the third phase of this skill, simulate CPR on the surface. Five points are given for perfect technique, and points are subtracted at the ITs discretion from the possible 10 for this portion of the rescue based on subjective evaluation.

Time (mm:ss) P	<u>oints</u>	Time (mm:ss)	Points
3 minutes or less	10	4:31 to 4:45	04
3:01 to 3:30	09	4:46 to 5:00	02
3:31 to 4:00	08	over 5 minutes	00
4:01 to 4:30	06		

#### Skill Five (10 points)

With eyes closed, swim a distance of 50 feet (15 meters) along a line or other reference device. Remove stage cylinders and swim an additional 50 feet (15 meters). Return to stage cylinders (IT should move cylinders around, but they will remain in the same area). By feel, cylinders will be retrieved and connected in the appropriate location. Swim an additional 50 feet (15 meters) and switch to lowest EANx mixture, then swim an additional 50 feet (15 meters) and switch to highest EANx or oxygen mixture. Score 10 points if performed correctly. Deduct 1 point for any loss of buoyancy control. Deduct 2 points if the cylinders are not stored in the proper place. Deduct 10 points if the candidate switches to the wrong gas mixture.

#### Skill Six (10 points)

Remove double cylinders and both stage cylinders, then replace doubles and both stages. Score 10 points if performed correctly. Deduct 1 point for each entanglement. Deduct 2 points for loss of buoyancy control. Deduct 2 points if skill takes more than 3 minutes to complete.

# **CCR Trimix Instructor**

### A. Purpose

1. This Program is designed to develop qualified IANTD CCR Instructors in an extended decompression diving environment using helium-based gas mixtures.

### B. Prerequisites

- 1. Must be qualified as a CCR Instructor in Active Teaching Status with a minimum of two years of teaching experience.
- 2. Must be qualified as at least <u>one</u> of the following:
  - a. An IANTD Trimix Instructor .OC who is a CCR instructor and has 150 Rebreather Dives including 50 dives using the CCR on which they would like to become an instructor.
  - b. A CCR Normoxic Trimix Instructor with proof of a minimum of at least 50 logged Trimix dives, who has taught 6 CCR Diver programs of which 3 must have been Normoxic Trimix CCR Diver Programs
  - c. Must have been either a CCR or OC Normoxic Trimix Instructor for at least one year and is taking the Trimix Instructor course on the specific CCR model to be used.
  - d. CCR Instructors crossing over from one CCR to another CCR may complete a crossover at the highest level of CCR instructor qualification they have attained (does not apply to IT status).
- 3. Must provide proof of a minimum of 400 logged dives, 150 rebreather dives, of which at least 50 on the specific CCR to be used.
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- 1. Review all academic portions of the IANTD CCR Trimix Diver Student Workbook and the CCR Owner's Manual.
- 2. Review all appropriate IANTD slides.
- 3. Assist in at least one Trimix CCR Diver Program, which may be part of the IEC.
- 4. Give assigned lectures and demonstrate a practical teaching skills to the IT's satisfaction.
- 5. Supervise all course dives on the CCR, and in the presence of the IT. Any skills are at the discretion of the IT to be taken from the Trimix CCR Diver course.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD CCR Trimix Diver Program are mandatory.
- 2. Must own or have unlimited access to a CCR.

### E. Program Limits

1. Same as for the IANTD Trimix CCR Diver Program.

### F. Qualification Renewal

1. Same as for the IANTD Trimix Instructor Program except at least one CCR Trimix Diver course must be taught.

- 1. A confined water session demonstrating <u>all</u> skills must be completed to the Instructor Trainer's satisfaction prior to conducting any open water dives.
- 2. Demonstrate skills during confined water sessions to the satisfaction of the IT.
- 3. Demonstrate class control to the IT's satisfaction.
- 4. Complete the Mandatory Watermanship Evaluation from the Trimix Instructor program while using CCR unless already documented in a previous program within the technical level. This is up to the ITs discretion.

# **Expedition Trimix Instructor**

### A. Purpose

- 1. This Program is designed to provide Instructor expertise for teaching Expedition level Trimix Divers.
- 2. The IANTD Expedition Trimix Instructor may teach Trimix to 400 fsw (120 msw).

### **B.** Prerequisites

- 1. IANTD Expedition Trimix Diver Student Manual and Workbook.
- 2. IANTD Standards and Procedures.
- 3. IANTD Technical Diver Encyclopedia.
- 4. Texts may be substituted with equivalent text(s) approved in writing by the Board of Directors (written approval will be issued by IAND, Inc./IANTD World Headquarters).

## C. Program Content

- 1. A 5 day Program consisting of instructor procedures, watermanship evaluations, and must assist with a complete Expedition Trimix Diver Program either prior to or as a part of the IEC. This IEC is dedicated to directing the Instructor candidate to the methods and techniques of training IANTD Expedition Trimix Divers.
- The IANTD Expedition Trimix Instructor IEC is staffed by an IANTD Expedition Trimix Instructor Trainer and one IANTD Trimix Instructor; OR, if the candidate has been evaluated by a different IANTD Trimix Instructor, the IEC may be conducted by one Trimix IT.
- 3. Must assist in one complete Trimix Diver Program either prior to or as part of the IEC.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the Expedition Trimix Diver Program.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 2 candidates per Instructor Trainer on dives deeper than 333 fsw (100 msw).
- 2. No dives may be conducted to depths greater than 400 fsw (120 msw).

### F. Qualification Requirements

1. Completion of the IANTD Expedition Trimix Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Trimix Instructor.

### G. Qualification Renewal

- 1. Teach a minimum of 3 IANTD Trimix Diver Programs annually, including one IANTD Expedition Trimix Diver Program.
- 2. Remain as an active IANTD member and pay annual Instructor renewal fees.
- 3. Log at least 3 non-teaching Expedition Trimix or Heliox dives annually.
- 4. Provide proof of insurance for a minimum one million U.S. dollars.

- 1. Supervise at least 3 Expedition Trimix dives.
- 2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in the Trimix Diver Program, as assigned by the Instructor Trainer.

# CCR Expedition Trimix Instructor

### A. Purpose

- 1. This Program is designed to provide Instructor expertise for teaching Expedition level Trimix Divers on CCR
- 2. The IANTD Expedition Trimix Instructor may teach Trimix to 400 fsw (120 msw).

### **B.** Prerequisites

- 1. Must be qualified as a Expedition Trimix Diver or
- 2. Must be qualified as an IANTD Trimix Instructor in Active Teaching Status for a minimum of 2 year s with five years of teaching experience,
- 3. Must provide proof of a minimum of 800 logged dives, of which at least 200 were trimix dives deeper than 200 fsw (60 msw), and at least 50 were CCR Trimix dives deeper than 240 fsw (72 msw).
- 4. Must have taught a minimum of 6 Trimix Diver programs.
- 5. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A 5 day Program consisting of instructor procedures, watermanship evaluations, and must assist with a complete CCR Expedition Trimix Diver Program either prior to or as a part of the IEC. This IEC is dedicated to directing the Instructor candidate to the methods and techniques of training IANTD Expedition Trimix Divers.
- The IANTD CCR Expedition Trimix Instructor IEC is staffed by an IANTD CCR Expedition Trimix Instructor Trainer and one IANTD CCR Expedition Trimix Instructor; OR, if the candidate has been evaluated by a different IANTD Trimix Instructor, the IEC may be conducted by one Trimix IT.
- 3. Must assist in one complete Trimix Diver Program either prior to or as part of the IEC.

### **D. Equipment Requirements**

- 1. All Equipment Requirements listed in the CCR Expedition Trimix Diver Program.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 2 candidates per Instructor Trainer on dives deeper than 333 fsw (100 msw).
- 2. No dives may be conducted to depths greater than 400 fsw (120 msw).

### F. Qualification Requirements

1. Completion of the IANTD CCR Expedition Trimix Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Trimix Instructor.

### G. Qualification Renewal

- 1. Teach a minimum of 3 IANTD Trimix Diver Programs annually, including one IANTD Expedition Diver Program.
- 2. Trimix Diver Program.
- 3. Remain as an active IANTD member and pay annual Instructor renewal fees.
- 4. Log at least 3 non-teaching Expedition Trimix or Heliox dives annually.
- 5. Present or publish a paper, or assist in either an IANTD EANx or IANTD Trimix IEC, or be an active member on an approved special projects committee.
- 6. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Supervise at least 3 Expedition Trimix dives.
- 2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Expedition Trimix Diver Program, as assigned by the Instructor Trainer.
- 3. Perform valve shutdowns in less than 45 seconds.

# **Technical or Normoxic Trimix Instructor Crossover**

### A. Purpose

- 1. This Program is designed to allow qualified technical level Instructors from other agencies to crossover to IANTD Technical or Normoxic Trimix Instructors.
- 2. Technical or Normoxic Trimix Instructors may teach Open Water Diver through Technical or Normoxic Trimix Diver.
- 3. Technical Cave, Technical Wreck and Instructors are Technical Instructors with the additional ability to teach those specialized areas.

### **B.** Prerequisites

- 1. Must be qualified as an Instructor with equivalent Technical qualification with another recognized agency and have taught the equivalent programs to IANTD within the agency they are crossing over from.
- 2. Must have a minimum of two years of teaching experience.
- 3. Must provide proof of a minimum of 350 logged dives, of which at least 100 were deeper than 130 fsw (39 msw) and at least 30 were on EANx or breathing mixtures other than air (includes decompression mixes).
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A 2-day Program directing the Instructor crossover candidate to the methods and techniques of training IANTD Technical or Normoxic Trimix Diver, plus assist with a confined water session and two dives as performed in a technical or Normoxic Trimix diver course and give at least two lectures as apart of the crossover IEC.
- 2. The IEC will be staffed by one Technical IT.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Technical Diver Program are mandatory.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 4 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).

### F. Qualification Renewal

- 1. Teach a minimum of 3 IANTD Programs including one IANTD Technical Diver Program annually in Active Teaching Status.
- 2. Remain as an active IANTD member, pay annual Instructor renewal fees, publish a technical paper or assist in an IANTD Instructor IEC.
- 3. Log at least 20 non-teaching Normoxic Trimix, cave or wreck dives using EANx or oxygen decompression annually.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Remove stage cylinder while swimming and replace it without a noticeable change in swim pace.
- 2. Supervise a dive with an Instructor Trainer acting as a student.
- 3. Assist on at least one confined water session and two dives in the Technical Diver Program.
- 4. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Technical Diver Program, as assigned by the Instructor Trainer.
- 5. Complete the Mandatory Watermanship Evaluation from the Technical or Normoxic Trimix Program while using the equipment required for this level of training unless already documented in a previous program within the technical level. This is up to the ITs discretion.

# **Technical Cave Diver Instructor Crossover**

### A. Purpose

1. This Program is designed to develop competent Instructors for teaching the safe usage of EANx mixtures while cave diving. The Technical Cave Instructor may teach all IANTD Sport and Technical Programs up through IANTD Technical Diver, IANTD Cave Diver and IANTD Technical Cave Diver.

### B. Prerequisites

- 1. Must be qualified as the equivalent to an IANTD Technical Cave Instructor *and* have taught the equivalent programs to IANTD within the agency crossing over from.
- 2. Must have a minimum of two years of teaching experience.
- 3. Must provide proof of a minimum of 350 logged dives, of which at least 175 were cave dives
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD Technical Cave Divers. The candidate is to give at least two lectures, supervise land drills, and confined water session plus either prior to, during the crossover IEC assist in a complete cave course.
- NACĎ, NSS/CDS, BSAC cave Diving Group and CDAA, Cave Instructors who are IANTD Technical Instructors already may crossover by attending a two day Program with an IANTD Cave IT acquainting them with IANTD Standards and Procedures on one day and observing them in an in-water teaching situation on an actual cave dive.
- 3. NACD, NSS/CDS, BSAC Cave Diving Group, and CDAA, etc. Instructors who are not Technical Instructors may crossover by completing a Technical IEC.
- 4. The IEC will be directed by an IANTD Cave IT.
- 5. Upon qualification the Technical Cave Instructor is qualified to teach cave and Technical Diver Programs.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Cave Diver Program are mandatory.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).

#### F. Qualification Requirements

- 1. Completion of the IANTD Technical Cave Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Technical Cave Instructor.
- 2. IANTD Technical Cave Instructors may find it beneficial to teach a modular system in cave diving (Overhead Environment, Introductory Cave, and Full Cave).
- 3. IANTD Cave Instructors are encouraged to become dual qualified with other agencies i.e. NACD, NSS/CDS, CDAA, etc.

#### G. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Technical Diver Programs annually, or co-teach a minimum of 3 IANTD Technical Diver Programs, including at least one IANTD EANx Cave Diver Program.
- 2. Remain as an active IANTD member and remit annual Instructor renewal fees.
- 3. Log at least 25 Overhead Environment dives annually, with a minimum of 20 non-teaching Cave dives.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Complete the Mandatory Watermanship Evaluation and all water skills listed in the Water Skills Development section of the Technical Diver Instructor Program.
- 2. Perform at least 2 evaluation dives with the IT acting as a student.
- 3. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Cave Diver Programs, as assigned by the Instructor Trainer.
- 4. Assist in at least one complete Cave Diver Program prior to, during the IEC.

# **Technical Wreck Diver Instructor Crossover**

### A. Purpose

1. This Program is designed to provide responsible training of high-quality Wreck Penetration Instructors. The Technical Wreck Instructor may teach all IANTD Sport Diver Programs as well as IANTD Technical Diver.

### **B.** Prerequisites

- 1. Must be qualified as the equivalent of an IANTD EANx Wreck Diver and have taught the equivalent programs to IANTD within the agency being crossed over from.
- 2. Must provide proof of a minimum of 350 logged dives, of which at least 150 were technical dives. A minimum of 100 of these dives must have been a combination of cave and wreck penetration, at least 50 of which were wreck penetration dives.
- 3. Must have taught a minimum of 3 Overhead Environment Programs.
- 4. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A comprehensive Program directing the Instructor candidate to the methods and techniques of training IANTD Technical Wreck Divers.
- 2. The IEC is staffed by a Wreck IT.
- 3. Must give do confined water teaching and assist in two dives that would be in a Technical Wreck Diver course.
- 4. Complete lecture and in water teaching assignments as assigned by the IT.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the IANTD Technical Wreck Diver Program are mandatory.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer.
- 2. No dives may be conducted to depths greater than 170 fsw (51 msw).

### F. Qualification Requirements

1. Completion of the IANTD Technical Wreck Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Technical Wreck Instructor.

### G. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Technical Diver Programs annually, or co-teach a minimum of 3 IANTD Technical Diver Programs, including at least one IANTD Wreck Diver Program.
- 2. Remain as an active IANTD member and pay annual Instructor renewal fees.
- 3. Log at least 25 Overhead Environment dives annually, with a minimum of 12 non-teaching Wreck Penetration dives.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Complete then Watermanship Skills Evaluation and all water skills listed in the Water Skills Development section of the Technical Diver Instructor Program.
- 2. Perform at least 2 evaluation dives with the IT acting as a student.
- 3. Demonstrate proficiency teaching and demonstrating the skills and techniques required in the Wreck Diver Program, as assigned by the Instructor Trainer, and supervise at least 4 wreck dives in a course.
- 4. Complete the Mandatory Watermanship Evaluation from the Technical Instructor Program while using the equipment required for this level of training.

# Trimix Instructor Crossover OC and Rebreather

### A. Purpose

1 This Program is designed to allow qualified instructors from other agencies to crossover to IANTD Trimix Instructor.

### **B.** Prerequisites

- 1. Must be qualified as the equivalent to an IANTD Trimix Instructor in Active Teaching Status for a minimum of 1 year with five years of teaching experience and have taught the equivalent programs to IANTD within the agency being crossed over from.
- 2. Must provide proof of a minimum of 500 logged dives, of which at least 200 were deeper than 100 fsw (30 msw), and at least 50 were Trimix dives.
- 3. Must be a minimum of 21 years of age.

### C. Program Content

- 1. A comprehensive Program consisting of Instructor procedures, watermanship evaluations, and assisting with a confined water session, 2 dives and 2 lectures in a Trimix Diver Program. This IEC is dedicated to directing the Instructor candidate to the methods and techniques of training IANTD Trimix Divers.
- 2. The IANTD Trimix Instructor crossover IEC is staffed by an IANTD Trimix Instructor Trainer.

### D. Equipment Requirements

- 1. All Equipment Requirements listed in the Trimix Diver Program are mandatory.
- 2. Oxygen analyzer.

### E. Program Limits

- 1. There may be no more than 3 candidates per Instructor Trainer on dives deeper than 200 fsw (60 msw).
- 2. No dives may be conducted to depths greater than 260 fsw (78 msw).

### F. Qualification Requirements

1. Completion of the IANTD Trimix Instructor IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Trimix Instructor.

### G. Qualification Renewal

- 1. Teach a minimum of 2 IANTD Technical Diver Programs annually, including one IANTD Trimix Diver Program.
- 2. Remain as an active IANTD member and pay annual Instructor renewal fees.
- 3. Log at least 10 non-teaching Trimix or Heliox dives annually.
- 4. Present or publish a paper, or assist in either an IANTD EANx or IANTD Trimix IEC, or be an active member on an approved special projects committee.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

- 1. Supervise at least 1 confined water session and 2 Trimix dives.
- 2. Demonstrate proficiency teaching and demonstrating the skills and techniques required in Trimix Diver Program, as assigned by the Instructor Trainer.
- 3. Perform valve shutdowns in less than 45 seconds.
- 4. Complete the Mandatory Watermanship Evaluation from the Trimix Instructor Program while using the equipment required for this level of training unless already documented in a previous program within the technical level. This is up to the ITs discretion.

# EANx & Trimix Blender Instructor and Life Support Service Technician Instructor

### A. Purpose

- 1. This Program is designed to train qualified Instructors to teach gas blending. There are two levels of Blending Instructors: EANx Blending Instructor and Trimix Blending Instructor.
- 2. This Program is designed to train competent Life Support Systems Service Technician Instructors.

### B. Prerequisites

1. Must be a qualified Service Technician from both IANTD and the manufacturer(s) whose equipment is being used or a graduate of IAST.

#### For EANx Blending Instructor:

- 2. Must be either an employee of an IANTD Facility who is already an EANx Blender, or an IANTD EANx Instructor in Active Teaching Status who is also an IANTD EANx Blender.
- 3. Must be recommended by an IANTD Facility or demonstrate a need for such qualification in writing to the IT.

#### For Trimix Blending Instructor:

- 4. Must be qualified as an EANx Blending Instructor unless IAND, Inc. / IANTD World Headquarters or its Licensed Region(s) grants a waiver.
- 5. Must be a Trimix Blender *or* an EANx Blending Instructor recommended by an IANTD Facility that has a need for Trimix Blending Instructors.
- 6. Must demonstrate experience as a blender in both EANx and Trimix.

### C. Program Content

- 1. Complete a one-day IEC updating the Instructor on Standards and recommendations applicable to gas blending.
- 2. Demonstrate in-depth knowledge and communication skills in teaching the principles of gas blending.
- 3. Demonstrate ability to explain and teach partial pressure blending, continuous blending, and either membrane technology or oxygen-separation technology.

### D. Equipment Requirements

- 1. IANTD Gas Blender Student Kit and Power Point Slides.
- 2. Recommended Helium Analyzer.
- 2. All equipment used in this Program must be compatible with the Trimix mixtures being prepared and the method in which the Trimix is being blended.
- 3. Approved mixing station.
- 4. Oxygen analyzer.

### E. Program Limits

1. The candidate may not exceed the limits prescribed for the designated gas mixture.

### F. Qualification Requirements

- 1. Complete the IEC to the satisfaction of IANTD Standards and Procedures.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Successfully teach blending assignments under the supervision of the IT.

### G. Qualification Renewal

- 1. Teach a minimum 3 Blending Instructor courses annually.
- 2. Remain as an active IANTD member and pay annual Instructor renewal fees.

# IAND, INC. / IANTD INSTRUCTOR TRAINER PROGRAMS

### A. General

- 1. IANTD Instructor Trainers, who are also ITs or Program Directors with other Open Water Agencies may continue to conduct Open Water Instructor Training / Development Programs through those agencies.
- IANTD Instructor Trainers must qualify EANx and Technical level Instructors through IANTD. Instructor Trainers who do qualify Instructors with other EANx or Technical diving agencies *instead of* IANTD or who advertise IANTD Instructor qualification and qualify through other Technical Associations will be suspended from IANTD Instructor Trainer status. (This may only be waived for <u>Air Cave Instructor</u> status with a recognized cave qualification such as NACD, NSS/CDS, CDAA, etc.) Dual qualification is recommended and may be performed.
- 3. IANTD Instructor Trainer Candidates must show proof of prior qualification in Oxygen Provider, AED, CPR and in Diving First Aid, or complete these qualifications in conjunction with the ITEC. Once qualified and after application to HQ, Advanced EANx Instructors and above may teach AED, CPR and Oxygen Provider as well as Diving First Aid. In order to teach, this skill set must be renewed every two years by practice and update from HQ.
- 4. IANTD Instructor Trainer Candidates must submit in writing to, and have written approval from, the IANTD Training Director of their Region, a statement of support for becoming an IT and why there is additional needs for an IT in the area to be serviced prior to enrolling in an IANTD Instructor Trainer IEC.
- IANTD Instructor Trainer Candidates must submit in writing to, and have written approval from the IANTD Training Director of their Region a business plan reflecting planned activity in regards to Instructor training prior to enrolling in an IANTD Instructor Trainer IEC.

### B. Text / Media

- 1. All IANTD courses require Student Kits to certify Divers and/or Instructors. Each IT MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD Diver OR Instructor OR Instructor Trainer program name" followed by the words Diver OR Instructor OR Instructor Trainer Student Kit.
- 2. IANTD course specific Power Point Slides.

### C. Teaching Prerequisites

- 1. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.
- 2. Be an IANTD Member and remit annual Instructor / Instructor Trainer Member fees.

NOTE: IANTD Rebreather Instructor Trainers may teach all IECs while using a rebreather provided they carry a bailout gas capacity of a minimum of 33% of the equivalent Open Circuit gas supply used by the candidate(s). To conduct an IANTD Technical Rebreather Instructor IEC, the Instructor Trainer must be an IANTD Technical Rebreather Instructor Trainer on the same rebreather to be used by the candidate. Rebreathers may only be used within their manufacturer's stated limits.

# **Open Water Instructor Trainer**

### A. Purpose

1. This Program is designed to provide responsible training for IANTD Open Water Instructor Trainers.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD Open Water Instructor in Active Teaching Status, with a minimum of three years of teaching experience.
- 2. Must have taught a minimum of 20 Open Water, 10 Advanced Open Water Diver, 10 Rescue Diver, 10 Divemaster, 10 Diver First Aid and 10 Oxygen Provider Programs.
- 3. Must provide proof of a minimum of 400 logged dives to a maximum depth of 130 fsw (39 msw).

### C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Assistant Instructors and IANTD Open Water Instructors. Teaching experience must be acquired by assisting (in both theory and practice) in a series of actual or simulated training sessions under the assessment of the ITT. Candidates shall not be given information in advance, on the precise skill or topic to be assessed.
- 2. The IANTD Instructor Trainer IEC is staffed by an IANTD Instructor Trainer Trainer, designated by IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### D. Equipment Requirements

1. Fulfill all Equipment Requirements as specified in the general Sport Diver Programs overview.

### E. Program Limits

- 1. There may be no more than 2 candidates per Instructor Trainer Trainer.
- 2. No dives may be conducted to depths greater than 130 fsw (39 msw).
- 3. All appropriate safety or required decompression stops must be performed.

### F. Qualification Requirements

1. Completion of the IANTD Open Water Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Open Water Instructor Trainer.

- 1. Conduct a minimum of 2 IANTD Instructor IECs and qualify at least 4 IANTD Open Water Instructors annually.
- 2. Fulfill all renewal requirements for IANTD Open Water Instructor.
- 3. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 50 dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollar

# Advanced EAN<sub>x</sub> Instructor Trainer

### A. Purpose

1. This Program is designed to provide responsible training for IANTD EANx Instructor Trainers.

### B. Prerequisites

- 1. Must be qualified as an IANTD Advanced EANx Instructor in Active Teaching Status, with a minimum of three years of teaching experience.
- 2. Must have taught a minimum of 20 Open Water, 10 IANTD EANx Diver, 10 IANTD Deep Diver and 10 IANTD Advanced EANx Diver Programs.
- 3. Must provide proof of a minimum of 400 logged dives, of which at least 100 were using breathing gases other than air as either a bottom mix or decompression mix.

### C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD EANx and Advanced EANx Instructors.
- 2. Demonstrate proficiency in training EANx blending Instructors.
- 3. The IANTD Instructor Trainer IEC is staffed by an IANTD Instructor Trainer Trainer, designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s)
- 4. Demonstrate lectures and theory for AED, CPR and Oxygen Provider as well as Diving First Aid Instructor Trainer.

### D. Equipment Requirements

1. Same as for the Advanced EANx Instructor Program.

### E. Program Limits

1. Same as for the EANx Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD EANx Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD EANx Instructor Trainer.

- 1. Conduct a minimum of 2 IANTD Instructor IECs and qualify at least 4 IANTD EANx Instructors annually.
- 2. Fulfill all renewal requirements for IANTD EANx Instructor.
- 3. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 50 dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# Advanced Recreational Trimix Instructor Trainer

### A. Purpose

1. This program is designed to provide responsible training for IANTD Advanced Recreational Trimix Instructor Trainers

# B. Prerequisites

- 1. Must be qualified as an Advanced Recreational Trimix Instructor in Active Teaching Status, with a minimum of three years of teaching experience.
- 2. Must have taught a minimum of 20 Sport Diver Level Programs, 10 IANTD Advanced EANx Diver Programs and 10 Recreational Trimix Diver Programs.
- 3. Must provide proof of a minimum of 400 logged dives, of which at least 100 were a combination of EANx and Trimix either a bottom mix or decompression mix.

# C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Recreational Trimix and Advanced Recreational Trimix Instructors.
- 2. Demonstrate proficiency in training Trimix blending Instructors.
- 3. The IANTD Instructor Trainer IEC is staffed by an IANTD Instructor Trainer Trainer, designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

## D. Equipment Requirements

1. Same as for the Advanced Recreational Trimix Instructor Program.

## E. Program Limits

1. Same as for the Advanced Recreational Trimix Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD Recreational Trimix Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Recreational Trimix Instructor Trainer.

- 2. Conduct a minimum of 2 IANTD Instructor IECs and qualify at least 4 IANTD Advanced EANx Instructors or Advanced Recreational Trimix Instructors annually.
- 3. Fulfill all renewal requirements for IANTD Advanced recreational Trimix Instructor.
- 4. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 5. Log at least 50 dives annually.
- 6. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# EANx & Trimix Gas Blender Instructor Trainer and Life Support Systems Service Technician Instructor Trainer

### A. Purpose

1. This Program is designed to provide responsible training for Life Supports Systems Service Technician Instructors and Blending Instructors.

### **B.** Prerequisites

- 1. Must be qualified as an IANTD Life Support Systems Service Technician Instructor and Trimix Blending Instructor
- 2. Must have taught a minimum of 10 Life Support Systems Technician courses, 10 EANx Blending Programs and 10 Trimix Blender Programs.

### C. Program Content

- 1. A 2-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Life Support Systems Technicians and Blending Instructors.
- 2. Demonstrate proficiency in training Blending Instructors and Life Support Systems Service Technician Instructors.
- 3. The IANTD Instructor Trainer IEC is staffed by an IANTD Instructor Trainer Trainer, designated by IAND, Inc. / IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### D. Equipment Requirements

- 1. Recommended Helium Analyzer
- 2. All equipment used in this Program must be compatible with the Trimix mixtures being prepared and the method in which the Trimix is being blended.
- 3. Approved mixing station.
- 4. Oxygen analyzer.

### E. Program Limits

1. No unsafe technician or blending practices.

### F. Qualification Requirements

1. Completion of the IANTD Life Support Systems and Blending Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Instructor Trainer.

- 1. Conduct a minimum of 2 IANTD Instructor IECs and qualify at least 4 IANTD Life Support Systems or Blending Technician Instructors annually.
- 2. Fulfill all renewal requirements for IANTD Life Support Systems and Blending Instructor.
- 3. Remain as an active IANTD Member and pay annual Instructor Trainer renewal fees.
- 4. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# Introductory Cave Instructor Trainer (OC Only)

### A. Purpose

- 1. This Program is designed to provide more safe and responsible training of IANTD Introductory Cave Instructors.
- 2. Instructor Trainers will only be trained in areas where the diving population density justifies the need.

### B. Prerequisites

- 1. Must meet all the prerequisites for Technical IT, except substitute Technical Cave for Technical Instructor teaching requirements.
- 2. Must be qualified as an IANTD EANx Instructor Trainer in Active Teaching Status, with at least two years of experience as an IANTD Introductory Cave Instructor in Active Teaching Status.
- 3. Must have conducted at least 3 IANTD EANx Instructor IECs.
- 4. Must have taught a minimum of 10 IANTD Introductory Cave Diver programs.
- 5. Must have taught a minimum of 6 IANTD Technical Cave Diver programs.
- 6. Must provide proof of a minimum of 700 logged dives, of which at least 250 were cave dives.

### C. Program Content

- 1. A three day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Introductory Cave Instructors.
- 2. The IANTD Introductory Cave Instructor Trainer IEC is staffed by an IANTD Technical Cave Instructor Trainer Trainer designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### **D. Equipment Requirements**

1. Same as for the IANTD Introductory Cave Instructor Program.

### E. Program Limits

1. Same as for the IANTD Introductory Cave Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD Introductory Cave Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Introductory Cave Instructor Trainer.

- 1. Conduct at least one IANTD Introductory Cave IEC annually.
- 2. Fulfill all renewal requirements for IANTD Technical Cave Instructor.
- 3. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 50 non-teaching Cave dives annually.
- 5. Provide proof of insurance.

# Wreck or Cavern Diver Instructor Trainer

### A. Purpose

- 1. This Program is designed to develop IANTD Wreck or Cavern Diver Instructor Trainers.
- 2. Instructor Trainers will only be trained in areas where the diving population density justifies the need.

### B. Prerequisites

- 1. Must be qualified as an IANTD EANx Cave or IANTD Wreck Instructor in Active Teaching Status, and Open Water / EANx Instructor Trainer.
- 2. Must have taught a minimum of 12 IANTD EANx Overhead Environment Diver Programs.
- 3. Must provide proof of a minimum of 400 logged dives, of which at least 100 were using breathing mixtures other than air, and at least 200 were Wreck or Cavern dives.
- 4. To qualify for both Cavern and Wreck, must provide proof of a minimum of 200 Cave dives and 200 Wreck dives.

### C. Program Content

- 1. A 3-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Wreck or Cavern Instructors.
- 2. The IANTD Wreck or Cavern Diver Instructor Trainer IEC is staffed by IANTD Wreck Diving Instructor Trainer Trainer or Cave Diving Instructor Trainer Trainer or designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### D. Equipment Requirements

1. Same as for the IANTD EANx Overhead Environment Diver Instructor Program.

### E. Program Limits

1. Same as for the IANTD EANx Overhead Environment Diver Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD EANx Overhead Environment Diver Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD EANx Overhead Environment Diver Instructor Trainer.

- 1. Conduct a minimum of 2 IANTD EANx Overhead Environment Diver IECs and qualify at least 4 EANx Overhead Environment Instructors.
- 2. Fulfill all renewal requirements for IANTD EANx Overhead Environment Instructor.
- 3. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 50 Overhead Environment dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# Normoxic Trimix Instructor Trainer OC and Rebreather

### A. Purpose

- 1. This Program is designed to insure quality training of IANTD Technical and Normoxic Trimix and Normoxic Trimix Rebreather Instructors.
- 2. Instructor Trainers will only be trained in areas where the diving population density justifies the need.

### B. Prerequisites

- 1. Must be qualified as an IANTD Open Water / EANx Instructor Trainer in Active Teaching Status who has conducted a minimum of 6 IANTD EANx IECs and who has qualified at least 12 IANTD EANx Instructors, and an IANTD Normoxic Trimix Instructor in Active Teaching Status for at least two years.
- 2. For Rebreather must be a Rebreather Instructor Trainer who has taught 6 Rebreather IECs and who has qualified at least 6 Rebreather Instructors on the Rebreather to become a Normoxic Trimix IT on.
- 3. Must be either a Normoxic Trimix Instructor or Normoxic Trimix Rebreather Instructor if doing the Rebreather Normoxic Trimix Instructor Trainer. Must have trained at least 12 Normoxic Trimix divers For Rebreather must be either 12 Rebreather Normoxic Trimix Divers or 12 total including 6 on Rebreathers.
- 4. Must provide proof of a minimum of 750 logged dives, of which at least 200 were on breathing mixtures other than air as a bottom mix or decompression mix.

### C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Technical and Normoxic Trimix Instructors or Normoxic Trimix Rebreather Instructors.
- The IANTD Normoxic Trimix Instructor Trainer IEC is staffed by IANTD Trimix Instructor Trainer Trainer or a Rebreather Trimix Instructor Trainer Trainer designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### D. Equipment Requirements

1. Same as for the IANTD Normoxic Trimix Diver Instructor Programs or Normoxic Trimix Rebreather Instructor Programs.

### E. Program Limits

1. Same as for the IANTD Normoxic Trimix Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD Normoxic Trimix Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Normoxic Trimix Instructor Trainer (OC or Rebreather).

- 1. Conduct a minimum of 2 IANTD Technical or Normoxic Trimix Instructor IECs and qualify a minimum of 4 Instructors annually.
- 2. Fulfill all renewal requirements of IANTD Normoxic Trimix Instructor.
- 3. Remain as an active IANTD Member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 75 dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# Technical Cave Instructor Trainer or CCR Cave Instructor Trainer

### A. Purpose

- 1. This Program is designed to provide safe and responsible training of IANTD Technical and CCR Cave Instructors.
- 2. Instructor Trainers will only be trained in areas where the diving population density justifies the need.

### **B.** Prerequisites

- 1. Must meet all the prerequisites for Technical IT or Normoxic Trimix CCR IT except substitute Technical Cave or CCR Cave for Technical Instructor teaching requirements.
- 2. Must be qualified as an IANTD Intro Cave Diver Instructor Trainer in Active Teaching Status, with at least two years of experience as an IANTD Technical Instructor or CCR Cave Instructor in Active Teaching Status.
- 3. Must have conducted a combination of at least 6 IANTD Cavern and Intro Cave Diver IECs.
- 4. Must have taught a minimum of one **or** the other **or** a combination of 15 IANTD Technical Cave Diver or CCR Cave Diver Programs.
- 5. Must provide proof of a minimum of 1,000 logged dives, of which at least 500 were cave dives.

### C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Technical Cave Instructors or CCR Cave Instructors.
- 2. The IANTD Technical Cave Instructor Trainer or CCR Cave Instructor Trainer IEC is staffed by an IANTD Technical Cave Instructor Trainer Trainer designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### D. Equipment Requirements

1. Same as for the IANTD Technical Cave Instructor or CCR Cave Instructor Program.

### E. Program Limits

1. Same as for the IANTD Technical Cave Instructor or CCR Cave Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD Technical Cave Instructor Trainer or CCR Cave Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Technical Cave Instructor Trainer or CCR Cave Instructor Trainer.

- 1. Conduct at least one IANTD Technical Cave IEC or CCR Cave IEC annually.
- 2. Fulfill all renewal requirements for IANTD Technical Cave Instructor or CCR Cave Instructor.
- 3. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 50 non-teaching Cave dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# **Technical Wreck Instructor Trainer**

### A. Purpose

- 1. This Program is designed to provide safe and responsible training of IANTD Technical Wreck Instructors.
- 2. Instructor Trainers will only be trained in areas where the diving population density justifies the need.

### B. Prerequisites

- 1. Must meet Prerequisites for Technical IT, except substitute Wreck courses for IANTD EANx Overhead Environment Diver IT, and an IANTD Technical Wreck Instructor in Active Teaching Status.
- 2. Must have taught at least 6 IANTD EANx Overhead Environment Diver IECs.
- 3. Must provide proof of a minimum of 750 logged dives, of which at least 500 were technical dives and 250 were wreck penetration dives.

### C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD EANx Wreck Instructors.
- 2. The IANTD Technical Wreck Instructor Trainer IEC is staffed by an IANTD Wreck Instructor Trainer Trainer and one Wreck Instructor Trainer designated by IAND, Inc./IANTD World Headquarters or outside of the USA, the IANTD Licensee holder(s).

### D. Equipment Requirements

1. Same as for the IANTD Technical Wreck Instructor Program.

### E. Program Limits

1. Same as for the IANTD Technical Wreck Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD Technical Wreck Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Technical Wreck Instructor Trainer.

- 1. Conduct at least one IANTD Wreck IEC and one EANx IEC, and qualify a minimum of 4 IANTD Wreck Instructors annually.
- 2. Fulfill all renewal requirements for IANTD EANx Instructor.
- 3. Fulfill all renewal requirements for IANTD Technical Wreck Instructor.
- 4. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 5. Log at least 50 Wreck dives annually.
- 6. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

### Trimix Instructor Trainer OC or Trimix Instructor Trainer Rebreather

### A. Purpose

- 1. This Program is designed to train competent IANTD Trimix Instructor Trainers. The IANTD Trimix Instructor Trainer may conduct EANx, Technical Instructor and Trimix IECs.
- Trimix Instructor Trainers who are also Expedition Trimix Instructors who have taught 3 Expedition Trimix diver courses and have at least 40 dives deeper than 333 fsw (100 msw) including 10 to 400 fsw (120 msw) or deeper will be upgraded to Expedition Trimix IT
- 3. Instructor Trainers will only be trained in areas where the diving population density justifies the need.

### B. Prerequisites

- 1. Must be qualified as an IANTD Normoxic Trimix Instructor Trainer and IANTD Trimix Instructor in Active Teaching Status. For rebreathers must have these qualifications on rebreathers.
- 2. Must have conducted at least 3 IANTD Technical Instructor IECs or Normoxic Trimix Instructor IECs, OC or Rebreather as appropriate.
- 3. Must have taught at least 6 IANTD Trimix Diver or Rebreather Trimix Diver Programs and 5 Trimix Blending Programs.
- 4. Must provide proof of a minimum of 750 logged dives, of which at least 100 were Trimix dives.

### C. Program Content

- 1. A 4-day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD Trimix.
- 2. The IANTD Trimix Instructor Trainer IEC is staffed by an IANTD Trimix Instructor Trainer Trainer OC or Rebreather as appropriate designated by IAND, Inc. / IANTD World Headquarters or outside of the USA, the IANTD Licensee holder

### **D. Equipment Requirements**

1. Same as for the IANTD Trimix Instructor Program.

### E. Program Limits

1. Same as for the IANTD Trimix Instructor Program.

### F. Qualification Requirements

1. Completion of the IANTD Trimix Instructor Trainer IEC and demonstration of a safe and responsible attitude allows the candidate to become qualified as an IANTD Trimix Instructor Trainer.

- 1. Conduct a minimum of 3 IANTD Instructor IECs annually, including 1 IANTD Trimix Instructor IEC.
- 2. Fulfill all renewal requirements for both IANTD Technical Instructor Trainer and IANTD Trimix Instructor.
- 3. Remain as an active IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log at least 6 Trimix or Heliox dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# **SCR Instructor Trainer**

### A. Purpose

1. This Program is designed to provide responsible training for IANTD SCR Rebreather Instructors.

### B. Prerequisites

- 1. Certified as an IANTD SCR Instructor on Active Teaching Status.
- 2. Certified as an IANTD Instructor Trainer on Active Teaching Status.
- 3. Log or proof of 400 dives including at least 100 dives on rebreathers and 50 on the specific SCR to become as an Instructor Trainer on.
- 4. Taught a minimum of 6 SCR programs and have certified 12 SCR divers on the specific SCR to become an IT on.
- 5. Assist in 2 CCR instructor courses (1 of these may be at the same time the IT IEC is conducted).
- 6. Be approved on an as needed basis to become an IT by IANTD HQ or the licensee of the territory the candidate resides in.

### C. IEC Content

- 1. A 2 day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD CCR Rebreather Instructors on a specific unit. If the 2<sup>nd</sup> course assist is in conjunction with the IEC then adequate days must be added to complete the program.
- 2. The IANTD SCR Instructor Trainer IEC shall be staffed by an IANTD SCR Instructor Trainer on the specific SCR to be qualified on.

### D. Equipment Requirements

1. Same as for IANTD Rebreather Instructor Program.

### E. IEC Limits

1. Same as for IANTD Rebreather Instructor Program.

### F. Certification Requirements

1. Completion of the specific SCR Instructor Trainer IEC and demonstration of a safe and responsible attitude qualifies the candidate for certification as an SCR Instructor Trainer.

### G. Certification Renewal

- 1. Conduct 2 IANTD Instructor IECs annually certifying at least 4 IANTD SCR Instructors.
- 2. Meet all teaching requirements for IANTD SCR Instructor.
- 3. Remain an IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log a minimum of 50 dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# **CCR Instructor Trainer**

### A. Purpose

1. This Program is designed to provide responsible training for IANTD CCR Rebreather Instructors.

### **B.** Prerequisites

- 1. Certified as an IANTD CCR Instructor on Active Teaching Status.
- 2. Certified as an IANTD Instructor Trainer on Active Teaching Status.
- 3. Log or proof of 400 dives including at least 200 hours on CCR and, 100 hours including 100 dives on the specific CCR to become an IT on.
- 4. Taught a minimum of 7 CCR or more programs on the specific CCR to become an IT and have certified 20 CCR divers.
- 5. Assist in 2 CCR instructor courses (1 of these may be at the same time the IT IEC is conducted).
- 6. Be approved on an as needed basis to become an IT by IANTD HQ or the licensee of the territory the candidate resides in.

### C. IEC Content

- 1. A 2 day Program directing the Instructor Trainer candidate to the methods and techniques of training IANTD CCR Rebreather Instructors on a specific unit. If the 2<sup>nd</sup> course assist is in conjunction with the IEC then adequate days must be added to complete the program.
- 2. The IANTD CCR Instructor Trainer IEC is staffed by an IANTD CCR Instructor Trainer Trainer on the specific CCR to be qualified on.

### D. Equipment Requirements

1. Same as for IANTD Rebreather Instructor Program.

### E. IEC Limits

1. Same as for IANTD Rebreather Instructor Program.

### F. Certification Requirements

1. Completion of the specific CCR Instructor Trainer IEC and demonstration of a safe and responsible attitude qualifies the candidate for certification as an SCR Instructor Trainer.

### G. Certification Renewal

- 1. Conduct 2 IANTD Instructor IECs annually certifying at least 4 IANTD CCR Instructors.
- 2. Meet all teaching requirements for IANTD CCR Instructor.
- 3. Remain an IANTD member and pay annual Instructor Trainer renewal fees.
- 4. Log a minimum of 50 dives annually.
- 5. Provide proof of insurance or financial responsibility for a minimum one million U.S. dollars.

# IAND, INC. / IANTD BLENDING STANDARDS

The Standards contained in this section are based on federal regulations as specified by OSHA, NOAA, USN, USCG, are the result of 2 meetings (detailed below), and were developed with international agreement. These also reflect the determinations of the DAN EANx workshop in November of 2001. As a training agency, IANTD defers to the manufacturer's guidelines where applicable

# <u>Manufacturers will define their individual needs and these will, provided they meet or exceed the requirements of IANTD, supersede IANTD Standards as applied to those individual manufacturers.</u>

- At NAULIQ in 1992 (Pennsylvania): The meeting included representatives of IANTD, ANDI and SDRG (Tom Mount, IAND, Inc./IANTD; Ed Betts, ANDI; and Richard Nordstrom, SDRG. Glen Butler acted as mediator.) The results are as follows: These Standards, except for the final gas purity, were agreed upon and adopted internationally as a result of this meeting.
- At Tek '93 (Orlando, Florida): A full day, with open participation, was devoted to blending Standards. Recognized authorities present included Morgan Wells, Ph.D. of NOAA, Tom Mount and Dick Rutkowski of IANTD, Ed Betts of ANDI, Commander Morrissey of DCIEM, John Comly, Larry Kaplan and Michael Casey both of Lawrence Factor. Glen Butler noted authority, also participated. The following gas purity Standards were adopted at that time. In addition, at the conclusion of this session Richard Nordstrom had IANTD and ANDI reconfirm on the record that the Standards, initially agreed upon at NAUI IQ '92, would continue unchanged.

NOTE: These Standards represent training Standards and do not dictate, supersede or alter the specifications of individual manufacturers for the use of their equipment. All equipment used for air, EANx or Trimix must be used per the guidelines of the individual manufacturers of the equipment used by the diver.

### A. Gas Quality For Preparation Of Breathing Gases Other Than Air

- 1. Air to be used in blending of gas mixtures other than air, will meet US CGA Standards Grade E, or equivalent, with the following modifications:
  - a. No more than 0.1 mg-per-meter<sup>3</sup> of condensed hydrocarbons.
  - b. No more than 2.0 parts-per-million carbon monoxide (CO).
- 2. The air may be produced by oil-lubricated, oil-less, or oil-free compressors. All air systems must have proper filtration to meet the specifications in item #1 (above).
- 3. Verification of gas analysis and gas composition is required quarterly by an appropriate facility.
- 4. IANTD facilities are to use IANTD band decals, label decals and VIP sticker decals with all breathing gases other than air.

### **B.** Equipment Specifications

- 1. Scuba cylinders being filled with a gas mixture (EANx or Trimix) from a pre-mixed bank (i.e., gas storage system) must use oxygencompatible lubricants. No other alteration of the cylinders is needed; provided the oxygen content is less than 40%.
  - a. If, at any stage of the mixing process, the oxygen content will exceed 40% of the cylinder capacity, the cylinder must be Oxygen Service Rated.
  - b. IANTD recommends (does not require), as good preventive maintenance, that all cylinders be cleaned annually, regardless of intended use; whether it be for air, EANx, Trimix or oxygen.
- 2. Scuba cylinders used in direct partial pressure blending (i.e., in-cylinder mixing) must be Oxygen Service Rated. This means it must use oxygen-compatible components and be oxygen-clean.
- 3. Regulators and all other equipment exposed to pressures of 200 psig (14 bar) or more **must** use oxygen-compatible lubricants. If the equipment is used in an environment where oxygen content will be greater than 40%, it must be Oxygen Service Rated.
- 4. Scuba equipment used with mixed gas should be used in accordance with the manufacturer's recommendations. If the manufacturer states that its equipment is incompatible with gases other than air, then that equipment should not be used. If a manufacturer requires its equipment to be modified for use with gases other than air, then the appropriate modifications must be made prior to the equipment being used for mixed gas diving.
- 5. Scuba equipment for breathing gases other than air should be dedicated and labeled appropriately.

### C. Labeling Bottom Mix EAN<sub>x</sub> Mixtures With Less Than 41% Oxygen

- 1. Where applicable, cylinders must be marked per legal requirements in addition to the following:
- 2. Cylinders painted yellow must be labeled with a 4-inch (10-centimeter) wide green band. The band must wrap around the tank starting at the flat of the cylinder. The label must state "Enriched Air Nitrox" (or an applicable acronym). IANTD has EANx decals available for labeling cylinders.
- 3. Cylinders painted with colors other than yellow require a 6-inch (15-centimeter) wide Enriched Air Nitrox band (decal) with the top 1 inch (2.5 centimeters) and the bottom 1 inch (2.5 centimeters) yellow. The middle of the band (decal) should be printed with a green background and the message, "Enriched Air Nitrox" (or an applicable acronym) printed in yellow for easy identification.

- 4. Nitrox (EANx) cylinders must have Cylinder Contents Labels affixed to them. The Contents label must state the oxygen percentage currently in the cylinder and the Maximum Operating Depth (MOD). The label must be dated and signed by the person who purchased (or requested) the mix (verifying he/she confirmed the O<sub>2</sub> percentage). This label may be a separate label, or part of the EANx band. IANTD has waterproof, reusable Cylinder Contents labels and cylinder content tape available for order.
- 5. Nitrox (EANx) cylinders must have a current Visual Inspection (VIP) decal stated that oxygen-compatible lubricants have been used in the system (valve, tank neck, and/or cylinder). EANx cylinders used with EAN 41, or greater, or for direct partial pressure blending use, must have an Oxygen Service Rated VIP decal. IANTD has VIP decals (which also cover both tank and valve inspections) available for order.
- 6. It is recommended that an additional label using one of the following options be used (these do not replace the requirement for the wrap around labels):
  - a. A Decal stating MOD to be placed lengthwise on the cylinder (IAND Inc./IANTD has these with both a fixed MOD plus blank ones for the user to fill in the MOD, these are blue with white lettering).
  - b. The MOD to be painted on the cylinder.
  - c. A cylinder wrap suitable for regulator hose storage with the MOD boldly marked on it (these are also available through IAND Inc./IANTD

### D. Labeling EAN<sub>x</sub> and Decompression Cylinders greater Than 41% Oxygen and Oxygen

 Cylinders containing EAN 40 to EAN 74 must have either a color-coded green and white label decal boldly stating, "Decompression Mix EAN\* \_\_\_\_\_." or the "Breathing Gases Other Than Air" decal that is red and white. These labels must be wrapped around the cylinder at the flat of the cylinder.
 \* Or, equivalent acronym.

NOTE: The "Breathing Gases Other Than Air" decal may be used with any gas mixture (as long as the mix and MOD are filled in). This label must be 10 inches (25 centimeters) long and 4 inches (10 centimeters) wide. IANTD has Cylinder Contents labels available for order.

- 2. The decompression cylinder regulator with the highest concentration of oxygen must have some form of protective mechanism to prevent the diver from accidentally breathing from it. This may be a cover, elastic wrap or other suitable means. IAND, Inc./IANTD has a protective device available.
- All decompression cylinders must have a tape or label above the flat of the cylinder visible to the user with the mix or MOD or both marked. IAND Inc./IANTD has these with pre-marked mix and MOD as well as labels with blank spaces for the user to fill in.
- 4. Cylinders containing oxygen concentrations of 75% to 83% may use either the decompression gas label or the oxygen label, provided it also has a MOD label if the mixture is used at 30 fsw (9 msw).
- 5. Cylinders containing oxygen concentrations of 84% or greater must conform to one of the following:
  - a. Be painted either green or white with the word "Oxygen" and "MOD 20 fsw (6 msw)" legible.
  - b. Have a 10-inch (25-centimeter) long by 4-inch (10-centimeter) wide green adhesive band decal with the word "OXYGEN" and the MOD clearly and prominently printed in white on it. IANTD has waterproof Oxygen Cylinder Decals available.
- 6. It is recommended that an additional label using one of the following options be used (these do not replace the requirement for the wrap around labels):
  - a. The MOD painted on the cylinder.
  - b. A Decal stating MOD, to be placed length-wise on the cylinder (IAND Inc./IANTD has these with both a fixed MOD plus blank ones for the user to fill in the MOD; both are blue with white lettering).
  - c. A cylinder wrap suitable for regulator hose storage with the MOD boldly marked on it (these are also available through IAND Inc./IANTD).

### E. Labeling Trimix Mixtures

1. Cylinders containing Trimix must be labeled with the word, "Trimix", or "Breathing gas other than air". A Cylinder Contents Label or tape reflecting the percentages of Oxygen, and Helium must be affixed to the cylinder.

# IAND, INC. / IANTD FACILITY STANDARDS

NOTE: All Technical and Full Service Facilities are required to post a quarterly oxygen compatible air analysis in their Facility near the gas station or in an area easily viewed by customers. In addition, a copy of the gas quality certificate must be available upon demand by IAND, Inc./IANTD World Headquarters or the local IANTD Licensee Headquarters.

Training Facilities must ensure that all training mixes use oxygen-compatible air for mixing.

To become an IANTD Facility, the Prerequisites in these Standards must be met and the Facility applicant must be reviewed and approved by IAND, Inc./IANTD World Headquarters (or the local IANTD Licensee where applicable) AND a regional Quality Control Board.

# IAND, Inc. / IANTD Facility Standards

### A. Purpose

1. IANTD's goal is to be fair and unbiased while assuring quality assurance throughout its membership. Confidentiality will be maintained anytime there is a violation of Standards or Procedures. The complainant's name(s) will not be disclosed to a member that is being investigated. In the event that a member disputes IANTD's actions against him or her, a formal hearing will be initiated with the complainant and any witnesses' names being made available to the accused. Independent IANTD Instructors shall also be held accountable to these Standards. This again will ensure the highest uniformity and fairness to all members of IANTD. These Standards are:

### B. Ethical

- 1. IANTD members shall follow IAND, Inc./IANTD Standards at all times.
- 2. IANTD members shall at no time disparage the IANTD organization or members in good standing.
- 3. IANTD members shall not represent themselves for other than what they are qualified to conduct. Misrepresentation shall be grounds for immediate suspension of membership and grounds for legal action by IANTD when appropriate, such as fraud, etc.
- 4. IANTD members are required to report witnessed violations immediately to IAND, Inc./IANTD World Headquarters. Failure to do so will result in immediate suspension of membership.
- 5. All reports of violations are to be documented and mailed to IAND, Inc./IANTD.
- 6. False reports of violations shall be grounds for immediate suspension of membership and grounds for legal action by IANTD, when appropriate.
- 7. Failure to respond to a violation inquiry within 30 days will result in immediate suspension of membership.

### C. Procedures

- 1. All cylinders for Nitrox, oxygen, Trimix, argon, etc. shall be properly labeled as defined in the Blending Standards.
- 2. Nitrox cylinders may be filled with air, provided that the air is oxygen compatible.
- All cylinders that are filled for customers must be recorded in a logbook at the filling station. Customers are required to log their fills after analysis, and either sign or initial the mix for each fill. Copies of this log are to be available to IAND, Inc./IANTD HQ upon request.
- 4. Cylinders may only be filled with the gas that the cylinder is labeled for.
- 5. All oxygen conversions on any equipment are to be performed only by a qualified Technician. A qualified technician must be an IANTD Blending Technician and also be qualified as an Equipment Technician by the manufacturer of the equipment that conversion is performed on.
- 6. All fills (except air) must be performed by a qualified Blender.
- 7. Visual inspection stickers must indicate that the cylinder has been cleaned and inspected for the gas being filled.
- 8. A proper IANTD cylinder contents label or IANTD content tape must contain the oxygen fraction and be initialed verifying the mix.
- 9. All cylinders and equipment to be used with gas mixtures other than air must be maintained in accordance with the minimum IANTD Blending Standards, plus meet all specifications of the individual manufacturer of the equipment being used.

### D. Waivers

1. Occasionally there are situations in which an exception to the Standards may be appropriate. To apply for a waiver, IANTD members must submit in writing the circumstances surrounding the need for a waiver to IAND, Inc./IANTD World Headquarters. The member submitting the request may not implement any deviations from the Standards until he or she has received written notification from IANTD. If approved, the waiver shall remain valid for a period of one year, at which time it will be the responsibility of the member to request a waiver renewal. IANTD may at any time revoke a waiver. Should circumstances, logistics or other factors change, then a new waiver must be requested. Waivers only apply to individuals, not Facilities.

### E. Failure To Comply

1. Facilities failing to comply with the above will be suspended and reviewed by the regional quality control board. If a mutually agreeable solution is attained, the Facility will be reinstated to active status. If a mutually agreeable solution is not attained, Facility status will be canceled.

# IAND, Inc. / IANTD Training Facility Membership

## A. To Qualify As An IAND, Inc./IANTD Training Facility the Following Requirements Must Be Met:

- 1. Be a professional Scuba Instructor and a licensed business whose principal activity must be SCUBA instruction, and the related activities.
- 2. Have availability of Enriched Air Nitrox mixtures from an IANTD Full Service Facility.
- 3. Be a qualified EANx Blender.
- 4. Provide IANTD quality training, the minimum requirements of which are:
  - a. Have on staff a qualified IANTD EANx Instructor (or higher qualification).
  - b. Offer IANTD classroom training on site, with confined water within a reasonable distance.
  - c. Promote and support the educational approach and concepts of IANTD training.
  - d. Conduct IANTD Programs in accordance with the current IANTD training materials and Standards.
  - e. Qualify all EANx and advanced or technical students through IANTD. IANTD Training Facilities that award qualification through another EANx or technical agency instead of the IANTD qualification will be suspended. Dual qualifications may be given provided.
- 5. Have access to Nitrox equipment rentals.
- 6. Have on site a minimum of two (2) Oxygen analyzers.

### B. IAND, Inc./IANTD Training Facility Membership Application Procedures

- To apply for Membership as an IANTD Training Facility, an application must be submitted with the proper documentation and appropriate fee. The IANTD regional Quality Control Board will review the application and if deemed necessary, a Member will make a site visit to the facility. Upon acceptance of the application, IANTD will issue an IANTD Training Facility identification number, certificate of membership and IANTD Training Facility membership kit.
- 2. IAND, Inc./IANTD reserves the right to deny, suspend or terminate Membership at any time for any actions that may be considered detrimental to the integrity, reputation or image of IAND, Inc./IANTD and its members.

# IAND, Inc. / IANTD Full Service Facility Membership

# A. To Qualify as An IAND, Inc./IANTD Full Service Facility the Following Requirements Must Be Met:

- 1. Be a professional dive store approved by IANTD, whose principal activity must be the retail sales of SCUBA instruction, equipment and related activities.
- 2. Offer Enriched Air Nitrox mixtures. Air analysis must be performed quarterly and the results of the testing posted near the gas station or in an area easily viewed by customers. In addition, a copy of the gas quality certificate must be available upon demand by IAND, Inc./IANTD World Headquarters or the local IANTD Licensee Headquarters. As part of an on going Quality Control Program, IANTD will request oxygen compatible certificates from facilities periodically. Air quality must meet or exceed the minimum requirements of CGA specifications of Grade E quality air, plus meet the O<sub>2</sub> compatible air requirements specified in the IANTD Standards.
- 3. Have a qualified EANx Blender on staff full time. Blenders must also be qualified EANx divers.
- 4. Provide IANTD quality training. Minimum requirements for training are:
  - a. Have on staff a qualified IANTD EANx Instructor.
  - b. Offer IANTD classroom training on site. Confined water must be within a reasonable distance from the store.
  - c. Promote and support the educational approach and concepts of IANTD training.
  - d. Conduct IANTD Programs in accordance with the current IANTD training materials and Standards.
- 5. Inventory IANTD support products: Decals, Tee Shirts, Tables, Texts / Manuals, etc.
- 6. Have Nitrox equipment rentals available and in good working order.
- 7. Have on staff a qualified equipment technician trained in oxygen equipment conversions and maintenance.
- 8. Have on site a minimum of two (2) Oxygen Analyzers.

### B. IAND, Inc./IANTD Full Service Facility Membership Application Procedures

- To apply for membership as an IAND, Inc./IANTD Facility, an application must be submitted with the proper documentation and appropriate fee. The IANTD regional Quality Control Board will review the application and, if deemed necessary, a member will make a site visit to the facility. Upon acceptance of the application, IANTD will issue an IANTD Facility identification number, certificate of membership and IANTD Facility membership kit.
- 2. IAND, Inc./IANTD reserves the right to deny, suspend or have terminate Facility Membership at any time for any actions that may be considered detrimental to the integrity, reputation, or image of IAND, Inc./IANTD and its members.

# IAND, Inc. / IANTD Technical Facility Membership

### A. To Qualify as An IAND, Inc./IANTD Technical Facility the Following Requirements Must Be Met:

- 1. Meet all of the requirements of an IANTD Full Service Facility.
- 2. Be an IANTD Full Service Facility in good standing for at least 6 months.
- 3. Have no Standards violations within the past 12 months.
- 4. Have Technical EANx and Trimix mixtures available.
- 5. Have a qualified Trimix Blender on staff full time. Blenders must also be qualified Trimix Divers.
- 6. Have on staff or available a qualified IANTD Technical EANx Instructor.

\*Items 2 & 3 can be waived for cause by the regional Quality Control Board.

### B. IAND, Inc./IANTD Technical Facility Membership Application Procedures

- To apply for membership as an IANTD Technical Facility, an application must be submitted with the proper documentation and appropriate fee. The IANTD regional Quality Control Board will review the application. Upon acceptance of the application, IANTD will issue an IANTD Technical Facility identification number, certificate of membership and IANTD Facility Membership kit.
- 2. IAND, Inc./IANTD reserves the right to deny, suspend or terminate membership at any time for any actions that may be considered detrimental to the integrity, reputation or image of IAND, Inc./IANTD or its members.

# IAND, INC. / IANTD LICENSEE STANDARDS

### A. General / Prerequisites

- 1. IANTD Licensees are the representatives of IAND, Inc./IANTD in the Regions specified by the License. Normally this will be limited to one country.
- In some cases, where insufficient diving populations exist to justify a Licensee, a combination of countries may unite to form a Licensee. In such cases, there will be a specified home office and directors will be representatives for all counties included within that Licensee Region.
- 3. During the development of the infrastructure of a given Region, prior to being eligible to apply for a Licensee, the prospective Licensee will work with an established Licensee or World Headquarters until it has grown to the point of qualification as a Licensee.
- 4. The following are needed to become eligible to apply for a Licensee:
  - a. A minimum of 10 EANx Programs must have been taught in the Region.
  - b. There must be at least three qualified Advanced EANx Instructors within the Region.
  - c. At least one person must be qualified to the level of EANx Instructor Trainer.
  - d. At least one person must be qualified to the level of Technical Instructor.
- 5. Must be a minimum of one IANTD Training Facility demonstrating compliance with IANTD Standards and Procedures with respect to Training Facility status (except where waived due to regional laws or regulations).

### B. IANTD Licensee Application

- 1. Fulfill the requirements specified above.
- 2. Present letters of endorsement from a minimum of three respected members in the diving community of the Region to be represented.
- 3. Submit a letter of recommendation from the IANTD Instructor Trainer or Licensee or World Headquarters as a sponsor of the Licensee.
- 4. Present a financial statement and business plan sufficient to support a Licensee. The business plan should detail the steps that ensure growth of IANTD in that Region. This includes the development of additional IANTD Instructors and Facilities. It should include an advertising schedule that consists of magazine advertising, trade shows, any special promotional efforts and other means of direct or indirect advertising. The business plan should include future goals determined by the Licensee for a minimum of five years.
- 5. The Licensee applicant must agree to and abide by the terms of the Licensee Agreement.
- 6. There must be a process included to show how timely financial exchanges will take place between the Licensee and IAND, Inc./IANTD World Headquarters.
- 7. The Licensee applicant must be willing to assist as needed in expanding other Licensee Regions in the same geographical part of the world, including training and sponsorship. In most instances, the newly developing Regions will work with the stated Licensee applicant until they have met the prerequisites to become a Licensee. At this time the current Licensee must be willing to sponsor the new territory's application for a Licensee.
- The application will be reviewed by both a Quality Control Board represented by other IANTD Licensees and IAND, Inc./IANTD World Headquarters. A site visit may be deemed necessary in some instances. When sponsored by another Licensee a site visit will be waived.
- 9. The Licensee must abide by the ethical and Standards requirements of IANTD. Failure to do so will lead to review by the Licensee Quality Control Board and the possibility of suspension if deemed necessary by a majority vote of the Quality Control Board and the BOD of IANTD.
- 10. Once approved, a Licensee must renew annually. Provided the Licensee has acted in good faith and maintained the Licensee agreement, renewal will be automatic.
- 11. If the Licensee violates the Licensee Contract, the Licensee agreement will be placed in suspension until reviewed by the Quality Control Board and the BOD of IANTD. If an agreeable solution is reached the Licensee will be placed back on active status. If an agreement cannot be determined Licensee status will be dissolved.

# **APPENDIX 1: IANTD STANDARDS FREE DIVING PROGRAMS**

### The following Standards apply to the specific Free Diver programs offered by IAND, Inc. / IANTD.

All IANTD courses require Student Kits to certify divers. Each student MUST have a full set of these reference materials during and following the completion of the class. The specific kit is titled "IANTD diver program name" followed by the words Student Kit.

### A. Purpose

1. This is the entry-level certification course for individuals wishing to learn the basics of snorkeling or skin diving for the purpose of enjoying the underwater realm.

### **B.** Prerequisites

- 1. Minimum age of 6.
- 2. Competent swimming skill.

### C. Program Content

- 1. Complete all theory in the IANTD Open Water Free Diver Student Kit.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Do a confined water session and one OW snorkel dive.

### D. Equipment Requirements

- 1. IANTD Open Water Free Diver Student Kit.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Buoyancy Systems.

### E. Program Limits

- 1. Classroom: Unlimited as long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water: Maximum of 15 students to one instructor (15:1).
- 3. Maximum Open Water depth of 10 fsw (3msw).
- 4. Maximum Shallow Water depth, shallow enough to stand up in.

### F. Water Skills Development

- 1. Successfully complete <u>one</u> of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Reverse Walk In.
  - d. Seated Entry.
- 2. Mask / Snorkel breathing:
- a. With mask.
- 3. Snorkel clearing / airway control:
  - a. Blast methods.
  - b. Displacement method.
- 4. Mask clearing Surface / Underwater:
  - a. Partial mask clear.
  - b. Full mask clear.
- 5. Snorkel Vest inflation/ deflation.
- 6. Surface Swimming use of fins:
  - a. Proper fin use / flutter kick.
  - b. Surface swim 15 feet (4.5 meters).
  - c. Perform in-water cramp removal.
- 7. Breathing techniques / breath-hold:
  - a. 3-4 breaths with breath-hold and clearing snorkel.
- 8. Surface Dives:
  - a. Equalization techniques.
  - b. Head down descent.
  - c. Complete body submersion.
- 9. Ascent procedures:
  - a. Raised hand method.

# **Open Water Free Diver**

### A. Purpose

1. This is the entry-level certification course for individuals wishing to learn the fundamentals of breath hold diving for the purpose of increasing underwater awareness.

### B. Prerequisites

- 1. Minimum age of 9 for Junior Open Water Free Diver or 16 for Open Water Free Diver certification.
- 2. Competent swimming skills.
- 3. IANTD Snorkeler / Skin Diver or equivalent experience.

### C. Program Content

- 1. Complete all theory in the IANTD Open Water Free Diver Student Kit.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Complete a confined water session and at least two OW Free Diving sessions. One dive must be to a depth of between 25 fsw (7.5 msw) and 33 fsw (10 msw).

### D. Equipment Requirements

- 1. IANTD Open Water Free Diver Student Kit.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.

### E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
  - a. Maximum of 10 students to one instructor (10:1).
  - b. Maximum Open Water depth of 33 fsw (10 msw).
  - c. Maximum shallow water depth of 15 feet (4.5 meters).

### F. Water Skills Development.

- 1. Watermanship & Stamina Surface
  - a. 900 ft (270 m) swim with fins, snorkel, and mask.
  - b. Tread water for a minimum of 5 minutes without floatation.
  - c. Horizontal underwater swim with equipment for 60 ft (18 m).
- 2. Emergency Ascents & Problem Management.
  - a. Buoyant ascent.
  - b. No mask ascent.
  - c. Swim 50 ft (15 m) without a mask, using a snorkel.
  - d. Assist ascending diver simulating blacking out.
- 3. Prepare Free Diving equipment without the assistance of the Instructor.
- 4. Successfully complete one of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Front Roll.
  - d. Reverse Walk In.
  - e. Seated Entry.
- 5. Mask / Snorkel breathing.
  - a. With mask.
  - b. Without mask.
- 6. Snorkel clearing / airway control.

- a. Blast methods.
- b. Displacement method.
- 7. Mask clearing Surface / Underwater.
  - a. Partial mask clear.
  - b. Full mask clear.
- 8. Surface Dives.
  - a. Equalization techniques.
  - b. Head down descent
  - c. Complete body submersion.
- 9. Ascent procedures.
- 10. Raised hand method Snorkel clearing / airway control.
  - a. Blast methods.
  - b. Displacement method.
- 11. Breathing techniques / breath-hold.
  - a. 3-4 breaths with breath-hold and clearing snorkel.
- 12. Surface Dives.
  - a. Equalization techniques.
  - b. Head down descent.
  - c. Complete body submersion.
- 13. Ascent procedures.
  - a. Raised hand method.
- 14. Underwater Swim
  - a. 33 ft (10 m) at 15 ft (4.5 m) depth.

# Advanced Free Diver

### A. Purpose

1. This is the intermediate level certification course for individuals wishing to expand their knowledge of breath hold diving for the purpose of increasing underwater awareness.

### **B.** Prerequisites

- 1. Minimum age of 12 for Junior Advanced Free Diver or 16 for Advanced Free Diver certification.
- 2. Competent swimming skills.
- 3. IANTD Open Water Free Diver or equivalent experience.

### C. Program Content

- 1. Complete all theory in the IANTD Advanced & Master Free Diver Student Kit.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Complete a confined water session and 4 free diving sessions with at least one free dive to depths between 50 fsw (15 msw) and 66 fsw (20 msw).

### D. Equipment Requirements

- 1. IANTD Advanced & Master Free Diver Student Kit.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.
- 7. Line cutting devices.
- 8. Surface signaling devices.
- 9. Depth gauges and timing devices.
- 10. Spare Air / Scuba bailout.

### E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
- 3. Maximum of 10 students to one instructor (8:1).
- 4. Maximum Open Water depth of 66 fsw (20 msw).

### F. Water Skills Development.

- 1. Watermanship & Stamina- Surface:
  - a. In Mask fins and snorkel swim a distance of 1200 feet (360 meters).
  - b. Tread water for a minimum of 10 minutes without floatation.
  - c. Horizontal underwater swim with equipment for 110 feet (33 meters).
- 2. Emergency Ascents & Problem Management:
  - a. Ascent with one fin with and without descent line.
  - b. Buoyant ascent.
  - c. Ascend with unconscious diver.
  - d. Assist ascending diver blacking out.
  - e. Rescue tow with unconscious diver.
- 3. Prepare Free Diving equipment without the assistance of the Instructor
- 4. Successfully complete two of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Front Roll.
  - d. Reverse Walk In.
  - e. Seated Entry.
- 5. Snorkel clearing / airway control:
  - a. Blast method.

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- b. Displacement method.
- 6. Mask clearing: Underwater:
  - a. Partial mask clear at 20-33 fsw (6-10 msw).
  - b. Full mask clear at 20-33 fsw (6-10 msw).
- 7. Buoyancy Control:
  - a. Positive.
  - b. Negative.
  - c. Neutral at 33 fsw (10 msw).
- 8. Surface Swim- use of fins:
  - a. Proper fin use flutter kick.
  - b. Sculling for propulsion.
  - c. Stationary position / sculling technique.
  - d. In-water cramp removal.
  - e. Surface swim 150 feet (45 meters).
- 9. Breathing techniques / breath-hold:
  - a. Proper breathing techniques with cycles.
  - b. Surface swim with breath-hold for 66 feet (20 meters).
- 10. Surface Dives:
  - a. Equalization techniques
  - b. Single Raised Leg descent.
  - c. Reach a minimum depth of 50 fsw (15 msw).
- 11. Proper Descent procedure:
  - a. Free descent without snorkel.
  - b. Weighted or anchored line descent.
  - c. Avoid line entanglement.
- 12. Ascent Procedure:
  - a. Raised Hand Method.
  - b. Avoid line entanglement.
  - c. Surface recovery.
- 13. Removal & Replacement of Weight Belt:
  - a. Surface.
  - b. Underwater 20-33 fsw (6-10 msw).
- 14. Underwater Swim:
  - a. 3 fin technique swims at 33 fsw (10 msw) or deeper.
  - b. 33 feet (10 meters) swim at 33 fsw (10 msw) or deeper.

# Master Free Diver

### A. Purpose

1. This is the most advanced level certification course for individuals wishing to expand their knowledge of breath hold diving for the purpose of increasing underwater awareness.

### **B.** Prerequisites

- 1. Minimum age of 16 years.
- 2. Competent swimming skills.
- 3. IANTD Advanced Free Diver or equivalent.

### C. Program Content

- 1. Complete all theory in the IANTD Advanced & Master Free Diver Student Kit.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Complete a confined water session and at least 4 free diving sessions which must have at least two dives deeper than 66 fsw (20 msw) and one dive to depths between 80 fsw (24 msw) and 100 fsw (30 msw).

### D. Equipment Requirements

- 1. IANTD Advanced & Master Free Diver Student Kit.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.
- 7. Line cutting devices.
- 8. Surface signaling devices.
- 9. Depth gauges and timing devices.
- 10. Spare Air / scuba bailout.

### E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
  - a. Maximum Open Water depth of 100 fsw (30 msw).

### F. Water Skills Development.

- 1. Watermanship & Stamina Surface:
  - a. 2,400 feet (720 meter) snorkel. (Handicapped students may use both their hands and feet).
  - b. Remain afloat in a stationary position with mask fins and snorkel for 20 minutes.
  - c. Horizontal underwater swim with equipment for 130 feet (39 meters).
- 2. Emergency Ascents & Problem Management::
  - a. Ascent with one fin with and without descent line.
  - b. Ascent without fins with and without descent line.
  - c. Buoyant ascent.
  - d. No mask ascent.
  - e. Ascend with 10 Lbs. (4.5 kilos).
  - f. Ascend with unconscious diver.
  - g. Assist ascending diver blacking out.
  - h. Rescue tow with unconscious diver.
  - i. Perform in water artificial resuscitation.
- 3. Prepare Free Diving equipment without the assistance of the Instructor
- 4. Successfully complete two of the following entries:
  - a. Giant Stride.
  - b. Back Roll.

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- c. Front Roll.
- d. Reverse Walk In.
- e. Seated Entry.
- 5. Snorkel clearing / airway control:
  - a. Blast method.
  - b. Displacement method.
- 6. Mask clearing: Underwater:
  - a. Partial mask clear at 50-66 fsw (15-20 msw).
  - b. Full mask clear at 50-66 fsw (15-20 msw).
- 7. Buoyancy Control:
  - a. Positive.
  - b. Negative.
  - c. Neutral at 33 fsw (10 msw).
- 8. Surface Swim use of fins:
  - a. Proper fin use flutter and frog kick.
  - b. Sculling for propulsion.
  - c. Stationary position / sculling technique.
  - d. In-water cramp removal.
  - e. Surface swim 180 feet (55 meters).
- 9. Breathing techniques / breath-hold:
  - a. Proper breathing techniques with patterns and cycles.
  - b. Surface swim with breath-hold for 40 feet (12meters).
- 10. Surface Dives:
  - a. Equalization techniques.
  - b. Single Raised Leg descent.
  - c. Reach a minimum depth of 75 fsw (23 msw).
- 11. Proper Descent procedure:
  - a. Free descent without snorkel.
  - b. Weighted or anchored line descent.
  - c. Avoid line entanglement.
- 12. Ascent Procedure:
  - a. Raised Hand Method.
  - b. Avoid line entanglement.
  - c. Surface recovery.
- 13. Removal & Replacement of Weight Belt:
  - a. Surface.
  - b. Underwater 20-33 fsw (6-10 mws).
- 14. Underwater Swim:
  - a. 3 fin technique swims at 50 fsw (15 msw) or deeper.
  - b. 100 feet (30 meters) at 50 fsw (15 msw) or deeper.
- 15. Surface Buoy Management:
  - a. Site set-up.
  - b. Line entanglement & removal.
  - c. Line management.

# Free Diving Divemaster

### A. Purpose

1. This is a Divemaster certification course for individuals wishing to learn the fundamentals of teaching, assisting and supervising breath hold divers during training and recreational free dives.

### **B.** Prerequisites

- 1. Minimum age of 18.
- 2. Be certified as a Master Free Diver.
- 3. Be in good medical & physical condition and with above average swimming skills.
- 4. Be a certified SCUBA diver.
- 5. Be a certified oxygen provider.
- 6. Submit documentation proving current CPR and First Aid certification within 2 years.

### C. Program Content

- 1. Complete all theory in the IANTD Open Water Free Diver Student Kit and IANTD Divemaster Student Kit.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Assist in a minimum of two free diver courses.

### D. Equipment Requirements

- 1. IANTD Open Water Free Diver Student Kit and IANTD Divemaster Student Kit.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.
- 7. Line cutting devices.
- 8. Surface signaling devices.
- 9. Depth gauges and timing devices.
- 10. Spare Air / Scuba bailout.

### E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
  - a. Maximum open water depth of 130 fsw (39 msw).
  - b. Maximum shallow water depth of 100 fsw (30 msw).
  - c. Minimum shallow water depth of 66 fsw (20 msw).

### F. Water Skills Development

- 1. Watermanship & Stamina Surface:
  - a. 800 feet (240 meter) snorkel.
  - b. 15 minute treading water without floatation.
  - c. Horizontal underwater swim with equipment for 100 feet (30 meters).
- 2. Emergency Ascents & Problem Management:
  - a. Ascent with one fin with and without descent line.
  - b. Ascent without fins without a descent line.
  - c. Buoyant ascent.
  - d. No mask ascent.
  - e. Ascend with 10 Lbs. (4.5 kilos).
  - f. Ascend with unconscious diver.
  - g. Assist ascending diver blacking out.
  - h. Rescue tow with unconscious diver.
  - i. Perform in water artificial resuscitation while doing a rescue tow for 100 feet (30 meters).
- 3. Supervising preparing Free Diving equipment.

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- 4. Successfully complete <u>all</u> of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Front Roll.
  - d. Reverse Walk In.
  - e. Seated Entry.
- 5. Snorkel clearing / airway control:
  - a. Blast method
  - b. Displacement method
- 6. Mask clearing: Underwater:
  - a. At surface
  - b. At depth
- 7. Buoyancy Control:
  - a. Positive
  - b. Negative.
  - c. Neutral at 33 fsw (10 msw).
- 8. Surface Swim use of fins:
  - a. Proper fin use flutter and frog kick.
  - b. Sculling for propulsion.
  - c. Stationary position / sculling technique.
  - d. In-water cramp removal.
  - e. Surface Swim 180 feet (54 meters).
- 9. Breathing techniques / breath-hold:
  - a. Proper breathing techniques with cycles.
  - b. Surface swim with breath-hold for 75 feet (22 meters).
- 10. Surface Dives:
  - a. Equalization techniques.
  - b. Single Raised Leg descent.
  - c. Head down, two leg.
  - d. Head up.
- 11. Proper Descent procedure:
  - a. Free descent without snorkel.
  - b. Avoid line entanglement.
  - c. Achieve minimum depth of 100 fsw (30 msw).
- 12. Ascent Procedure:
  - a. Raised Hand Method.
  - b. Avoid line entanglement.
  - c. Surface recovery.
- 13. Cramp Removal.
- 14. Distressed Diver Tow.

### **Snorkeling Instructor**

### A. Purpose

1. This is the entry level Instructor certification course for individuals wishing to learn the fundamentals of teaching breath hold diving for the purpose of increasing student underwater awareness.

### B. Prerequisites

- 1. Minimum age of 18.
- 2. Be certified as an Open Water Free Diver or equivalent. Or
- 2. Be a certified and active scuba instructor in good standing. Or
- 2. Be certified as an IANTD SCUBA Dive Master.

### NOTE: All IANTD SCUBA Dive Masters and Instructors may teach this program.

### C. Program Content

- 1. Complete all theory in the IANTD Open Water Free Diver Student Kit and IANTD Power Point Slides OR the IANTD Advanced & Master Free Diver Student Kit and IANTD Power Point Slides.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Be evaluated in an IEC and assist in two snorkel diving programs unless already qualified as an IANTD SCUBA Dive Master or SCUBA Instructor.

### D. Equipment Requirements

- 1. IANTD Open Water Free Diver Student Kit and IANTD Power Point Slides **OR** the IANTD Advanced & Master Free Diver Student Kit and IANTD Power Point Slides.
- 2. Follow the equipment requirements in the Snorkel Diver program.

### E. Program Limits

1. Follow the program limits for snorkel diver.

### F. Water Skills Development.

1. Demonstrate all water skills in the snorkel diver program.

# **Open Water Free Diver Instructor**

### A. Purpose

1. This is the entry level Instructor certification course for individuals wishing to learn the fundamentals of teaching breath hold diving for the purpose of increasing student underwater awareness.

# B. Prerequisites

- 1. Minimum age of 18.
- 2. Be certified as a Master Free Diver OR an IANTD Dive Master OR be a certified and active Scuba Instructor in good standing.
- 3. Be in good medical & physical condition and with above average swimming skills.
- 4. Submit documentation proving current CPR and First Aid certification within 2 years.
- 5. IANTD Instructors and Divemasters who completed the OW Free Diver Instructor option in either the Divemaster or Instructor course may teach this program.

### C. Program Content

- 1. Complete all theory in the IANTD Open Water Free Diver Student Kit and IANTD Open Water Free Diver Power Point Slides.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving. Assist in two IANTD Free Diving programs one of which may be in conjunction with the IEC.
- 4. Complete a two day IEC staffed by a Free Diving IT.

### D. Equipment Requirements

- 1. IANTD Open Water Free Diver Student Kit and IANTD Open Water Free Diver Power Point Slides.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.
- 7. Line cutting devices
- 8. Surface signaling devices.
- 9. Depth gauges and timing devices.
- 10. Spare Air / Scuba bailout.

## E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
  - a. Shallow Water Maximum of 6 candidates to one instructor or IT (6:1).
  - b. Open Water Maximum of 6 candidates to one instructor or IT (6:1).
  - c. Maximum open water depth of 66 fsw (20 msw).
  - d. Maximum shallow water depth of 33 fsw (10 msw).
  - e. Minimum shallow water depth of 20 fsw (6 msw).

## F. Water Skills Development.

- 1. Watermanship & Stamina Surface:
  - a. Swim 2,400 feet (720 meters) using mask, snorkel and fins (swim with fins only; handicapped divers may use both hands and feet). Swim must be completed in under 18 minutes.
  - b. Swim for a distance of 1,200 feet (360 meters). In under 12 minutes.
  - c. Tow a diver for a distance of 600 feet (180 meters) on the surface in under 10 minutes.
  - d. 15 minute treading water without floatation.
  - e. Breath hold static for at least one minute and fifteen seconds.
  - f. Horizontal underwater swim with equipment for 100 feet (30 meters).
- 2. Emergency Ascents & Problem Management:
  - a. Ascent with one fin with and without descent line.
  - b. Buoyant ascent.

- c. No mask ascent.
- d. Ascend with unconscious diver.
- e. Assist ascending diver blacking out.
- f. Simulate in water artificial resuscitation while doing a rescue tow for 100 feet (30 meters).
- 3. Supervising preparing Free Diving equipment.
- 4. Successfully demonstrate <u>all</u> of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Front Roll.
  - d. Reverse Walk In.
  - e. Seated Entry.
- 5. Demonstrate snorkel clearing / airway control:
  - a. Blast method.
  - b. Displacement method.
- 6. Demonstrate mask clearing: Underwater:
  - a. At surface.
  - b. At depth.
- 7. Demonstrate buoyancy control:
  - a. Positive.
  - b. Negative.
  - c. Neutral at 33 fsw (10 msw).
- 8. Demonstrate Surface Swim use of fins:
  - a. Proper fin use flutter and frog kick.
  - b. Sculling for propulsion.
  - c. Stationary position / sculling technique.
  - d. In-water cramp removal.
  - e. Surface Swim 180 feet (54 meters).
- 9. Demonstrate Breathing techniques / breath-hold:
  - a. Proper breathing techniques with cycles.
  - b. 3-4 breaths with breath-hold and clearing snorkel.
  - c. Surface swim with breath-hold for 66 feet (20 meters).
- 10. Demonstrate Surface Dives:
  - a. Equalization techniques.
  - b. Single Raised Leg descent.
  - c. Head down, two leg.
  - d. Head up.
- 11. Demonstrate Proper Descent procedure:
  - a. Free descent without snorkel.
  - b. Avoid line entanglement.
  - c. Achieve minimum depth of 100 fsw (30 msw).
- 12. Demonstrate Ascent Procedure:
  - a. Raised Hand Method.
  - b. Avoid line entanglement.
  - c. Surface recovery.
- 13. Demonstrate Cramp Removal.
- 14. Demonstrate Distressed Diver Tow.

# Advanced Free Diver Instructor

### A. Purpose

1. This is the advanced level Instructor certification course for individuals wishing to learn the fundamentals of teaching breath hold diving for the purpose of increasing student underwater awareness.

### **B.** Prerequisites

- 1. Minimum age of 18.
- 2. Be certified as a Master Free Diver and be either an IANTD Divemaster OR be an active Scuba Instructor in good standing.
- 3. Be in good medical & physical condition and with above average swimming skills.
- 4. Be qualified as an Oxygen Provider.
- 5. Submit documentation proving current CPR and First Aid certification within 2 years.

### C. Program Content

- 1. Complete all theory in the IANTD Advanced Free Diver Student Kit IANTD Advanced Free Diver Power Point Slides.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving.
- 4. Complete an Advanced Free Diver Instructor IEC staffed by a Master Free Diving IT.

### D. Equipment Requirements

- 1. IANTD Advanced Free Diver Student Kit IANTD Advanced Free Diver Power Point Slides.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.
- 7. Line cutting devices.
- 8. Surface signaling devices.
- 9. Depth gauges and timing devices.
- 10. Spare Air / Scuba bailout.

### E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
  - a. Shallow Water Maximum of 4 candidates to one instructor.
  - b. Open Water Maximum of 4 candidates to on IT.
  - c. Maximum open water depth of 100 fsw (30 msw).
  - d. Maximum shallow water depth of 80 fsw (24 msw).
  - e. Minimum shallow water depth of 66 fsw (20 msw).

### F. Water Skills Development

1. Watermanship & Stamina - Surface: Swim 2,400 feet (720 meters) using mask, snorkel and fins (swim with fins only; handicapped divers may use both hands and feet).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
15:21 to 15:59 20	17:41 to 18:00 17	19:41 to 20:00 12	21:21 to 21:30 05
16:00 to 16:20 19 ½	18:01 to 18:20 16 1/2	20:01 to 20:20 11	21:31 to 21:40 04
16:21 to 16:40 19	18:21 to 18:40 16	20:21 to 20:40 10	21:41 to 21:50 03
16:41 to 17:00 18 ½	18:41 to 19:00 15	20:41 to 21:00 08	21:51 to 22:00 02
	19:01 to 19:20 14	21:01 to 21:10 07	over 22 minutes 00
17:01 to 17:20 18	19:21 to 19:40 13	21:11 to 21:20 06	
17:21 to 17:40 17 ½			

Swim for a distance of 1,200 feet (360 meters). Subtract four minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in12 minutes or less, the score would be 20 points).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
8 minutes or less 20	11:01 to 11:20 17	12:46 to 13:00 14	14:16 to 14:30 10
8:01 to 8:40 19 1/2	11:21 to 11:40 16 ½	13:01 to 13:15 13 ½	14:31 to 14:45 9
8:41 to 9:20 19	11:41 to 12:00 16	13:16 to 13:30 13	14:46 to 15:00 8
10:01 to 10:20 18 ½	12:01 to 12:15 15 ½	13:31 to 13:45 12 ½	15:01 to 15:15 6
10:21 to 10:40 18	12:16 to 12:30 15	13:46 to 14:00 12	15:16 to 15:30 4
10:41 to 11:00 17 ½	12:31 to 12:45 14 ½	14:01 to 14:15 11	15:31 to 16:00 2

- Tow a diver for a distance of 200 feet (60 meters) on the surface while simulating rescue breathing, then simulate actions for activation of the EMS procedure and remove victim's equipment. 20 points are for overall procedure and technique, scored per IT evaluation.
- 3. Swim a distance underwater in confined water of 130 feet (39 meters) following two or more minutes of slow deep breathing with a maximum of 4 hyperventilations at the end of the breathing cycle. Total point value 20 points. To be scored as follows:
- 4. Full distance completed on first attempt 20 points: 120 feet (36 meters) completed 15 points; 110 feet (33 meters) completed10 points; Three (3) attempts maximum allowed. If the full distance is completed on additional attempts then the score may be increased by 3 points over the initial score In addition subtract 1 point for every second over 150 that it takes the diver to complete the skill and subtract one point for every second faster than 80 seconds that the diver completes the skill in.

#### NOTE: A surface diver must swim above the candidate during this skill in case of blackout.

5. Static breathold: Candidates are not allowed to hold breath for a longer duration than 2:30 on this skill.

Time (mm:ss)	Points	Time (mm:ss)	Points
2:15 to 2:30	20	1:35 to 1:39	17
2:00 to 2:14	191/2	1:30 to 1:34	15
1:50 to 1:59	19	1:25 to 1:29	10
1:40 to 1:49	18	less than 1:25	00

- 6. 15 minute treading water without floatation.
- 7. Horizontal underwater swim with equipment for 100 feet (30 meters).
- 8. Emergency Ascents & Problem Management:
  - a. Ascent with one fin with and without descent line.
  - b. Ascent without fins without a descent line.
  - c. Buoyant ascent.
  - d. No mask ascent.
  - e. Ascend with 10 Lbs. (4.5 kilos).
  - f. Ascend with unconscious diver.
  - g. Assist ascending diver blacking out.
  - h. Rescue tow with unconscious diver.
  - i. Perform in water artificial resuscitation while doing a rescue tow for 100 feet (30 meters).
- 9. Supervising preparing Free Diving equipment.
- 10. Successfully complete <u>all</u> of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Front Roll.
  - d. Reverse Walk In.
  - e. Seated Entry.
- 11. Snorkel clearing / airway control:
  - a. Blast method.
  - b. Displacement method.
- 12. Mask Clearing Underwater:
  - a. At surface.
  - b. At depth.
- 13. Buoyancy Control:
  - a. Positive.
  - b. Negative.

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- c. Neutral at 33 fsw (10 msw).
- 14. Surface Swim use of fins:
  - a. Proper fin use flutter and frog kick.
  - b. Sculling for propulsion.
  - c. Stationary position / sculling technique.
  - d. In-water cramp removal.
  - e. Surface Swim 180 feet (55 meters).
- 15. Breathing techniques / breath-hold:
  - a. Proper breathing techniques with cycles.
  - b. 3-4 breaths with breath-hold and clearing snorkel.
  - c. Surface swim with breath-hold for 75 feet (22 meters).
- 16. Surface Dives:
  - a. Equalization techniques.
  - b. Single Raised Leg descent.
  - c. Head down, two leg.
  - d. Head up.
- 17. Proper Descent procedure:
  - a. Free descent without snorkel.
  - b. Avoid line entanglement.
  - c. Achieve minimum depth of 100 fsw (30 msw).
- 18. Ascent Procedure:
  - a. Raised Hand Method.
  - b. Avoid line entanglement.
  - c. Surface recovery.
- 19. Cramp Removal.
- 20. Distressed diver tow.

# Master Free Diver Instructor

### A. Purpose

1. This is the highest instructional level in the recreational free diving depths, as an Instructional course for individuals wishing to expand their teaching knowledge of breath hold diving for the purpose of increasing underwater awareness.

### **B.** Prerequisites

- 1. Minimum age of 18.
- 2. Be certified as an Advanced Free Diver Instructor *and either* an IANTD Divemaster *OR* be a certified and active Scuba Instructor in good standing.
- 3. Be in good medical & physical condition and with above average swimming skills.
- 4. Be a qualified CPR Instructor.
- 5. Submit documentation proving current CPR and First Aid certification within 2 years.

### C. Program Content

- 1. Complete all theory in the IANTD Master Free Diver Student Kit and IANTD Master Free Diver Power Point Slides.
- 2. Complete the written exam with a minimum score of 80%.
- 3. Demonstrate an understanding of the principles of free diving.
- 4. Complete a Master Free Diving Instructor IEC.

### D. Equipment Requirements

- 1. IANTD Master Free Diver Student Kit and IANTD Master Free Diver Power Point Slides.
- 2. Masks, Fins, Snorkels.
- 3. Exposure Protection.
- 4. Weight Systems.
- 5. Buoyancy Systems.
- 6. Flags and floats.
- 7. Line cutting devices.
- 8. Surface signaling devices.
- 9. Depth gauges and timing devices.
- 10. Spare Air / Scuba bailout.

### E. Program Limits

- 1. Classroom Unlimited, so long as adequate facility, supplies and time are provided to insure complete training.
- 2. Open Water
  - a. Shallow Water Maximum of 12 students to one instructor (12:1).
  - b. Open Water Maximum of 6 students to one instructor (6:1).
  - c. Maximum open water depth of 130 fsw (40 msw).
  - d. Maximum shallow water depth of 100 fsw (30 msw).
  - e. Minimum shallow water depth of 66 fsw (20 msw).

### G. Water Skills Development

1. Watermanship & Stamina - Surface: Swim 4,800 feet (1,440 meters) using mask, snorkel and fins (swim with fins only; handicapped divers may use both hands and feet).

Time (mm:ss)	Points	Time (mm:ss)	Points	Time (mm:ss)	Points	Time (mm:ss)	Points
29:40 to 30;00	20	31:20 to 31:39	17 1/2	33:00 to 33:09	141/2	34:30 to 34:39	09
30:01 to 30:19	19 1/2	31:40 to 31:59	17	33:10 to 33:14	14	34:40 to 34:49	08
30:20 to 30:39	19	32:00 to 32:14	16 ½	33:15 to 33:29	13	34:50 to 34:59	06
30:40 to 30:59	18 ½	32:15 to 32:29	16	34:00 to 34:09	12	35:00 to 35:09	03
		32:30 to 32:44	15 1/2	34:10 to 34:19	11	35:10 to 36	02
31:00 to 31:19	18	32:45 to 32:59	15	34:20 to 34:29	10	over 36 minutes	5 00

Swim for a distance of 1,200 feet (360 meters). Subtract four minutes from actual time to score handicapped candidates, such as those with a missing limb (e.g., if performed in12 minutes or less, the score would be 20 points).

Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points	Time (mm:ss) Points
8 minutes or less 20	11:01 to 11:20 17	12:46 to 13:00 14	14:16 to 14:30 10
8:01 to 8:40 19 ½	11:21 to 11:40 16 ½	13:01 to 13:15 13 ½	14:31 to 14:45 9
8:41 to 9:20 19	11:41 to 12:00 16	13:16 to 13:30 13	14:46 to 15:00 8
10:01 to 10:20 18 ½	12:01 to 12:15 15 ½	13:31 to 13:45 12 ½	15:01 to 15:15 6
10:21 to 10:40 18	12:16 to 12:30 15	13:46 to 14:00 12	15:16 to 15:30 4
10:41 to 11:00 17 ½	12:31 to 12:45 14 ½	14:01 to 14:15 11	15:31 to 16:00 2

- Tow a diver for a distance of 600 feet (180 meters) on the surface while simulating rescue breathing, then simulate actions for activation of the EMS procedure and remove victim's equipment. 20 points are for overall procedure and technique, scored per IT evaluation.
- 3. Swim a distance underwater in confined water of 160 feet (48 meters) following two or more minutes of slow deep breathing with a maximum of 4 hyperventilations at the end of the breathing cycle. Total point value 20 points. To be scored as follows:
  - a. Full distance completed on first attempt 20 points: Full distance completed on second attempt 18 points; Full distance completed on third attempt 10 points; Three (3) attempts maximum allowed. In addition subtract 1 point for every second over 150 that it takes the diver to complete the skill and subtract one point for every second faster than 80 seconds that the diver completes the skill in.

#### NOTE: A surface diver must swim above the candidate during this skill in case of blackout.

4. Static breathold: Candidates are not allowed to hold breath for a longer duration than 3 ½ minutes on this skill.

Time (mm:ss)	Points
2:45 to 3:30	20
2:30 to 2:44	191/2
2:15 to 2:29	19
2:00 to 2:14	181/2
1:30 to 1:59	15
less than 1:30	00

- 5. 15 minute treading water without floatation.
- 6. Horizontal underwater swim with equipment for 100 feet (30 meters).
- 7. Emergency Ascents & Problem Management:
  - a. Ascent with one fin with and without descent line.
  - b. Ascent without fins without a descent line.
  - c. Buoyant ascent.
  - d. No mask ascent.
  - e. Ascend with 10 Lbs. (4.5 kilos).
  - f. Ascend with unconscious diver.
  - g. Assist ascending diver blacking out.
  - h. Rescue tow with unconscious diver.
  - i. Perform in water artificial resuscitation while doing a rescue tow for 100 feet (30 meters).
- 8. Supervising preparing Free Diving equipment.
- 9. Successfully complete <u>all</u> of the following entries:
  - a. Giant Stride.
  - b. Back Roll.
  - c. Front Roll.
  - d. Reverse Walk In.
  - e. Seated Entry.
- 10. Snorkel clearing / airway control:
  - a. Blast method.
  - b. Displacement method.
- 11. Mask clearing: Underwater:
  - a. At surface.

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- b. At depth.
- 12. Buoyancy Control:
  - a. Positive.
  - b. Negative.
  - c. Neutral at 33 fsw (10 msw).
- 13. Surface Swim use of fins:
  - a. Proper fin use flutter and frog kick.
  - b. Sculling for propulsion.
  - c. Stationary position / sculling technique.
  - d. In-water cramp removal.
  - e. Surface Swim 180 feet (55 meters).
- 14. Breathing techniques / breath-hold:
  - a. Proper breathing techniques with cycles.
  - b. 3-4 breaths with breath-hold and clearing snorkel.
  - c. Surface swim with breath-hold for 75 feet (22 meters).
- 15. Surface Dives:
  - a. Equalization techniques.
  - b. Single Raised Leg descent.
  - c. Head down, two legged.
  - d. Head up.
- 16. Proper Descent procedure:
  - a. Free descent without snorkel.
  - b. Avoid line entanglement.
  - c. Achieve minimum depth of 100 fsw (30 msw).
- 17. Ascent Procedure:
  - a. Raised Hand Method.
  - b. Avoid line entanglement.
  - c. Surface recovery.
- 18. Cramp Removal.
- 19. Distressed Diver Tow.