



## LEADERSHIP PREP MANUAL

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## **ABOUT SCUBA EDUCATORS AND PDIC INTERNATIONAL (SEI/PDIC)**

As a recreational scuba diver, you have experienced a new world under the surface of the water. For many, helping others join our recreational activity by becoming a leader, is as rewarding as diving itself. This *Leadership Preparation Manual* is designed as a guide for recreational scuba divers who desire to participate in the SEI/PDIC teaching program. This Manual outlines the various degrees of SEI/PDIC Leadership and the requirements necessary to obtain each level.

Purposes, objectives and requirements for each certification are included so that you can determine which level of leadership training fits your goal. The study guides are designed to allow you to prepare yourself prior to formal training in SEI/PDIC Leadership Institutes.

SEI/PDIC does not allow discrimination against people with disabilities in any of their programs. It is policy of SEI/PDIC to encourage all individuals to actively participate in skin and scuba programs to the maximum level of their capability.

Read through this manual with special attention to the sections on "Typical Training Progress" and "Renewal, Insurance and Re-certification Requirements" prior to deciding on which level of the Leadership program matches your goals. The requirement for liability insurance to be certified as an Instructor may affect this choice.

After reading this material, contact a SEI/PDIC Instructor or the SEI/PDIC office to obtain details on how to enter our leadership program.

Welcome to Scuba Educators and PDIC International.

**SCUBA EDUCATORS INTERNATIONAL  
PDIC INTERNATIONAL  
LEADERSHIP AGREEMENT OF ETHICAL PRACTICES**

I agree to:

1. Uphold and maintain the standards of all SEI/PDIC programs as set forth by the most current SEI/PDIC Standards and Procedures Manual and SEI/PDIC Instructor Guides.
2. Obtain and maintain liability insurance (where applicable) and to comply with the warranties, conditions and limitations of that policy.
3. Act at all times in a manner consistent with the safety of students and divers under my supervision.
4. Conduct myself in a manner consistent with the best practices and standards of the scuba industry and of the SEI/PDIC program.
5. Fulfill all obligations, written or implied, in any SEI/PDIC program in which I participate.
6. Complete all SEI/PDIC Instructional Programs (including open water training) in a timely manner.
7. Submit all paperwork and fees, upon completion of a student's course of instruction in which all requirements necessary for certification have been performed, within four (4) weeks from the conclusion of the course. Maintain course records for a minimum of five (5) years.
8. Teach and certify using SEI/PDIC standards and materials.
9. Refrain from making derogatory, defamatory, slanderous or libelous comments whether in oral or in written form about any scuba agency, organization or group.
10. Recognize and teach the importance of protecting our environment and strive to protect it.
11. Bear sole responsibility for determining that each student has met all criteria for receiving a successful course completion certification card and certificate in accordance with current SEI/PDIC standards.
12. Report all accidents involving personal injury (including death) that have occurred during SEI/PDIC training activities immediately and in the event no later than seventy-two (72) hours and in writing to SEI/PDIC's Legal Counsel upon request. Additionally, on becoming aware of any event, act, error or omission that might reasonably be expected to be the basis of a claim or suit against me, or any SEI/PDIC leadership member, I will notify SEI/PDIC headquarters within forty-eight (48) hours.
13. Waive, release and forever discharge SEI/PDIC, its Directors, Officers, shareholders, employees, agents, members, insurers, successors and assigns ("Released Parties"), of and from any and all claims and demands of every nature and description, including but not limited to claims for personal injury (including death) and property damage, and arising directly or indirectly from the teaching of SEI/PDIC courses, and/or my acts or omissions and the acts or omissions of my employees, agents or other persons under my supervision or control. I further agree to indemnify and save Released Parties harmless from any and all loss, cost damage and expense (including attorney fees) arising from the claim of any third party relating directly or indirectly to the teaching of SEI/PDIC courses, and/or my acts or omissions and the acts or omissions of my employees, agents or other persons under my supervision or control.

14. Maintain proper health and fitness to enable me to safely and competently perform all of my duties and services and, if I should ever become unable to do so, I will immediately notify SEI/PDIC and stop teaching and supervising diving until I provide a physician's statement satisfactory to SEI/PDIC that I can safely and competently resume my duties and services. By submitting this application, I represent and warrant that I am physically and mentally fit to safely and competently perform all of my duties and services as an SEI/PDIC Leadership member, and I acknowledge that SEI/PDIC reserves the right to request a physician's statement or other proof of fitness at any time.

15. Notify SEI/PDIC headquarters if I have previously been convicted of a felony or crime of moral turpitude (i.e. honesty, integrity, morals). Conviction of such a crime may make me ineligible for continued membership, application for membership or renewal of membership or from teaching or acting in a leadership role.

16. Utilize the SEI/PDIC logo, trademarks and other intellectual property of SEI/PDIC in line with our policy and in accordance of the most current version of the SEI/PDIC Standards and Procedures Manual.

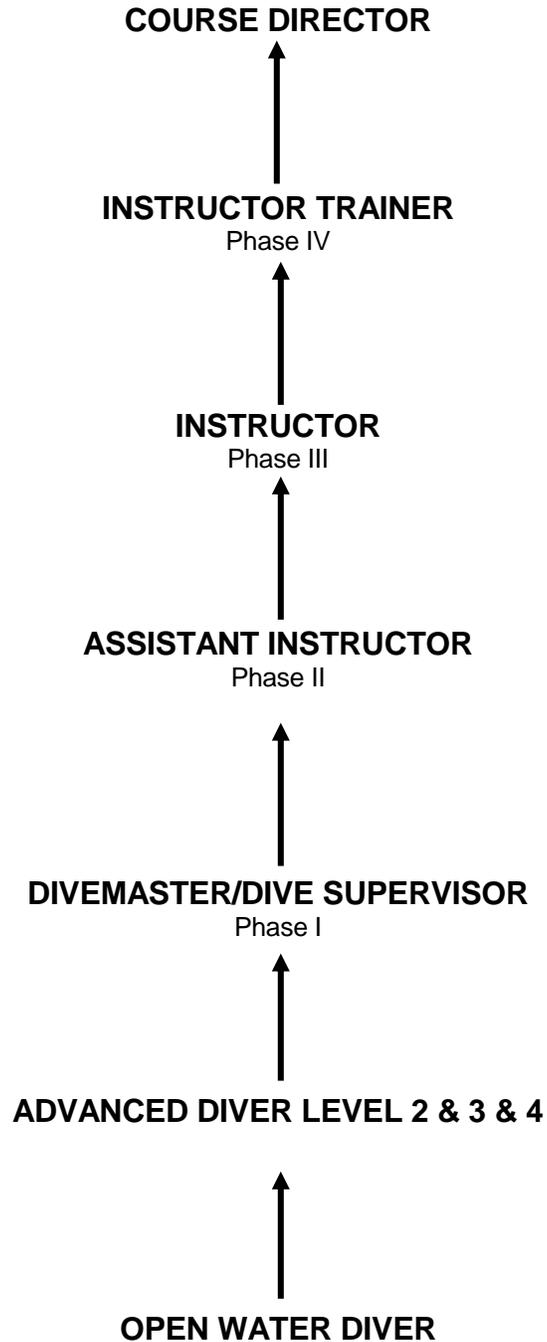
17. Maintain a current mailing and e-mail address with SEI/PDIC headquarters.

18. Authorize any other scuba diving association or organization with which I am affiliated to release to SEI/PDIC any and all records and other information pertaining to any investigation, action, or proceeding involving me. I understand that:

- I am not an agent, employee, or legal representative of SEI/PDIC.
- My SEI/PDIC membership is not to be construed as a partnership, joint venture or joint enterprise nor does it establish an agency relationship between me and SEI/PDIC.
- I may be subject to quality assurance monitoring process conducted by SEI/PDIC.
- My membership renewal is not solely based upon submission of the renewal application and fee (if applicable). SEI/PDIC Membership renewal is subject to annual review and acceptance by SEI/PDIC.
- SEI/PDIC Leadership cards are issued by SEI/PDIC and are the property of SEI/PDIC and must be surrendered upon request by the SEI/PDIC Executive Director or his/ her representatives.
- If I do not renew my membership annually, I lose SEI/PDIC membership resulting in a suspension of teaching status, and I may have to meet special renewal requirements before renewal will be considered.

## LEADERSHIP TRAINING PROGRESSION IN SEI/PDIC

An Open Water certified diver with a desire to obtain leadership certification as an Instructor in SEI/PDIC must progress through Divemaster/Dive Supervisor then Assistant Instructor before going on to Instructor training. Each level has prerequisites as well as exit requirements for certification. The chart below outlines this progression.





## **PROGRAM OBJECTIVES**

### **DIVEMASTER/DIVE SUPERVISOR(DM/DS) Phase I**

A certified SEI/PDIC Divemasters/Dive Supervisors may provide on-site leadership for groups of certified divers during recreational scuba dives or for students during training under the supervision of a SEI/PDIC Instructor in accordance with SEI/PDIC standards. DM/DS may conduct the tour portion of the entry-level Open Water certification after the first dive and evaluation of skills has been completed by an Instructor. At no time may a DM/DS assume full responsibility for a scuba class.

The DM/DS course includes at least 40 hours of instruction involving classroom, pool and open water training. Any current SEI/PDIC Instructor can teach this program. The classroom portion includes staff lectures on Physics, Physiology, Diving Medical Aspects, Decompression Theory, Psychology of Stress, and many other topics. This material is at a level sufficient to provide knowledge for the students throughout the leadership program.

Certification renewal is required annually. Liability insurance for DM/DS working with an Instructor is recommended and is required when working alone.

### **ASSISTANT INSTRUCTOR Phase II**

Assistant Instructor certification is a required step in becoming a SEI/PDIC Instructor. Assistant Instructors may teach the SEI/PDIC Snorkeling for Families Course. During the open Water Diver course, Assistant Instructors may be used in all aspects of classroom and pool or confined water training under the supervision of a SEI/PDIC Instructor. However, an Instructor must evaluate all skills. During open water training for Open Water Diver, the Assistant Instructor may conduct tours only after all skill evaluation and the first dive has been completed by the Instructor. The emphasis of the Assistant Instructor program is to show the participants how and what to teach once they become an Instructor.

The Assistant Instructor course requires at least 23 hours. Certification renewal is required annually and liability insurance for Assistant Instructors is recommended but not required.

### **INSTRUCTOR Phase III**

Instructor certification permits an individual to teach and certify scuba students. The Instructor must always promote safe diving and uphold the standards of SEI/PDIC. The Instructor should also develop scuba leadership for SEI/PDIC by instructing Divemasters/Dive Supervisors, Assistant Instructors and assisting in programs for new Instructors.

The certification Institute for Instructors includes at least 35 to 40 hours of classroom, pool and open water time. Certification renewal and proof of insurance is required annually.

### **CROSSOVER INSTRUCTOR**

Instructors currently certified and in good standing with another agency can cross over and become SEI/PDIC Instructors by completing the Instructor Crossover Institute. A portion of the institute is dedicated to giving the candidates an appreciation of the philosophies of SEI/PDIC. The Instructor Trainer, through testing and evaluation, ensures that the candidate will be a credit to our program.

## **SPECIALTY INSTRUCTOR**

An Instructor can become qualified to teach one or more of the specialty areas. Teaching these specialty areas extends the programs offered beyond entry and advanced level courses. The primary diver specialty certification courses in SEI/PDIC include:

### **SEI core specialties**

Dry Suit Diver  
Ice Diver  
Search and Recovery - Public Safety Diver  
Dive Rescue and Accident Management  
Underwater Navigation

Equipment Service  
Nitrox Diver  
Reef Ecology  
Full Face Mask Diver

### **PDIC core specialties**

DRAM Rescue Diver  
Dry Suit Diver  
Nitrox Diver  
Coral Reef Ecology  
Search and Recovery  
Underwater Hunter

Equipment Service  
Ice Diver  
Crime Scene Investigator  
Underwater Navigation  
Night Diver

Additional specialty programs are in the process of being added.

## ENTRANCE REQUIREMENTS

Each of the leadership areas has specific entrance requirements. As progress is made toward Instructor certification, additional skills and experience are added to each level. The SEI/PDIC Standards and Procedures Manual is required for Divemasters/Dive Supervisors and beyond and contains details of all programs. The next two sections of this manual will help the prospective student prepare for each program. Below are “entrance requirements” and do not include other requirements for certification.

### DIVEMASTER/DIVE SUPERVISOR(DM/DS) Phase I

1. 18 years of age or older.
2. Medical approval by a physician within the past 12 months
3. Statement of Understanding/Waiver & Release completed and signed
4. Hold a SEI/PDIC DRAM Rescue Diver certification or be certified in scuba rescue by another recognized agency
5. Be a certified Open Water Diver with a recognized agency
6. Be a certified SEI/PDIC Advanced Level 3, or have at least 20 logged dives including experience in night, navigation, deep (beyond 60 feet) and search and recovery diving
6. Hold a current First Aid certificate (NSC, AHA, ARC, ASHI or equivalent).
7. Hold a current CPR certificate (NSC, AHA, ARC, ASHI or equivalent) Health Care Provider or equivalent.
8. To be considered for any SEI/PDIC Program Leadership certification, the candidate/student must not have any standards violations or have been dismissed from the SEI/PDIC program or any other scuba certification agency. This prerequisite may be waived with written permission from the SEI/PDIC Regional Representative and SEI/PDIC CEO prior to training
9. Hold a current O<sub>2</sub> Provider certification prior to certification as a Divemaster/Dive Supervisor
10. Have a current SEI/PDIC Leadership Standards and Procedures Manual

### ASSISTANT INSTRUCTOR Phase II

1. 18 years of age or older
2. Medical approval by a physician within the past 12 months
3. Statement of Understanding/Waiver & Release completed and signed
4. Hold a SEI/PDIC DRAM Rescue Diver certification or be certified in scuba rescue by another recognized agency
5. Complete Divemaster/Dive Supervisor training or approved equivalent level from recognized agency
6. Have logged a minimum of 40 dives
7. Hold a current Standard First Aid certification (NSC, AHA, ARC, ASHI or equivalent)
8. Hold a current CPR certification (NSC, AHA, ARC, ASHI or equivalent) Health Care Provider or equivalent.
9. Hold a current Oxygen Provider certification (DAN or equivalent)
10. Have a current SEI/PDIC Leadership Standards and Procedures Manual
11. To be considered for any SEI/PDIC Leadership certification, the candidate/student must not have any standards violations or have been dismissed from SEI/PDIC or any other scuba certification agency. This prerequisite may be waived with written permission from the SEI/PDIC CEO prior to training.

## **INSTRUCTOR Phase III**

1. 18 years of age or older
2. At least one year of diving experience since entry-level certification
3. Medical exam with physician's approval. The medical exam must be for scuba diving and completed less than one year prior to the beginning of the Instructor Institute. The exam used for Assistant Instructor certification, may be used only if within this one-year requirement. The medical questionnaire used in entry and advanced level classes, is not acceptable to meet this requirement
4. Statement of Understanding/Waiver and Release completed and signed
5. Hold a SEI/PDIC DRAM Rescue Diver certification or be certified in scuba rescue by another recognized agency. DRAM Rescue Diver training may be included as training hours for Instructor certification
6. Have completed requirements for certification as a SEI/PDIC Divemaster/Dive Supervisor
7. Complete requirements for or be certified as a SEI/PDIC Assistant Instructor. (The candidate must have completed Assistant Instructor training even though the certification card may not have arrived)
8. Instructor candidates are required to have a minimum of 60 logged dives since entry-level certification and a minimum 100 logged dives before completing Instructor training. An up-to-date logbook must be presented by the candidate. The 60 prerequisite dives must include at least 5 categories from the list below:
  - a. 10 dives to greater than 80 feet
  - b. 10 dives utilizing full wet suit including hood and gloves or dry suit
  - c. 10 dives using minimal thermal protection, i.e. dive skin or shorty
  - d. 10 night dives
  - e. 10 low visibility dives (less than 3 feet visibility)
  - f. 10 fresh water dives
  - g. 10 salt-water dives
  - h. 10 dives in surf, drift or current conditions
  - i. 4 specialty certifications
9. Show proof of scuba teaching experience as follows:
  - a. 15 hours of lecture experience
  - b. 18 hours of pool teaching
  - c. Assisting in at least three separate open-water class checkout sessions

Note: On 9 above, proof of lecture, water teaching and open-water checkout training must be in the form of a letter from the candidate's sponsoring Instructor. In some cases, this experience may be gained by assisting an Instructor that certifies for another agency. Waiver of this requirement may be made only by the Director of SEI/PDIC.

10. Current First Aid certification (NSC, AHA, ARC, ASHI or equivalent)
11. Current CPR certification (NSC, AHA, ARC, ASHI or equivalent) (Health Care Provider or equivalent)
12. Current Oxygen Provider certification (DAN or equivalent)
13. Have a current SEI/PDIC Leadership Standards and Procedures Manual
14. To be considered for any SEI/PDIC Program Leadership certification, the candidate/student must not have any standards violations or have been dismissed from the SEI/PDIC Program or any other scuba certification agency. This prerequisite may be waived with written permission from the SEI/PDIC Regional Representative and SEI/PDIC CEO prior to training.

## **INSTRUCTOR CROSSOVER**

1. 18 years of age or older
2. Medical exam with physician's approval. The medical exam must be for scuba diving and completed less than one year prior to the beginning of the institute.
3. Statement of Understanding/Waiver and Release completed and signed.
4. Hold a SEI/PDIC DRAM Rescue Diver certification or be certified in scuba rescue by another recognized agency. DRAM Rescue Diver training may be completed any time prior to or during the Instructor Crossover Institute.

5. Active teaching status as an insured instructor for over one year with a recognized scuba certification agency with no verified quality assurance complaints and the following minimum experience:
6. Have logged a minimum of 100 scuba dives. An up-to-date logbook must be presented by the candidate.
7. Current Standard First Aid certification (NSC, AHA, ARC, ASHI or equivalent).
8. Current CPR certification (NSC, AHA, ARC, ASHI or equivalent) (Health Care Provider or equivalent.)
9. Current Oxygen Provider certification (DAN or equivalent).
10. Have a current SEI/PDIC Leadership Standards and Procedures Manual
11. To be considered for any SEI/PDIC Program Leadership certification, the candidate/student must not have any standards violations or have been dismissed from the SEI/PDIC Program or any other SCUBA certification agency. This prerequisite may be waived with written permission from the SEI/PDIC Regional Representative and SEI/PDIC CEO prior to training.

## **MATERIALS REQUIRED**

In addition to the above prerequisites, Instructor and Crossover Instructor candidates must have the following materials with the latest revisions:

1. SEI/PDIC Open Water Diver Instructor Guide
2. SEI/PDIC Diver Rescue and Accident Management Manual (DRAM)
3. SEI/PDIC Leadership Prep Manual
4. SEI/PDIC & PDIC Air Diving Tables
5. SEI/PDIC "Diving Fundamentals for Leadership" (the text for SEI/PDIC leadership training)

Note: Instructors from other agencies with considerable experience may be required to complete less than is stated here for crossover into SEI/PDIC. Please consult the SEI/PDIC Standards and Procedures Manual, Part II, Becoming an Instructor page.



## ACADEMIC STUDY GUIDE

Knowledge of the many areas of advanced diving is as important as being proficient at water skills for the scuba leader. This section is a study guide for SEI/PDIC leadership students/candidates.

Instructors seeking to cross over from another agency to SEI/PDIC Instructor often find the information necessary to pass the instructor exams exceeds their background knowledge. Study before the institute is necessary to be successful. Those Crossover Instructors that audit portions of the Divemaster/Dive Supervisor and Assistant Instructor courses have the greatest success in passing the Crossover Institute.

References for reading material are listed in the Appendix of this manual. Please make note that these reference books are continually being changed. Therefore, it is wise to ask your sponsoring Instructor or the SEI/PDIC Program Office for assistance in seeking the latest material.

The amount of study time required will certainly depend on your background knowledge in areas related to these subjects. However, some refresher study time should be spent even in areas of expertise. Extra review of diving physics, physiology, medical aspects, decompression theory and SEI/PDIC dive tables will prove worthwhile.

### DIVEMASTER/DIVE SUPERVISOR and ASSISTANT INSTRUCTOR

Both the Divemaster/Dive Supervisor and the Assistant Instructor students must be able to pass exams that contain questions on a wide range of advanced diving and leadership subjects. Much of that material will be presented in the Divemaster/Dive Supervisor course. A study guide is included here to assist the prospective student in the quest for additional knowledge.

Material presented in the Open Water Diver text should be reviewed. Also, the text for all levels of leadership training in SEI/PDIC is *Diving Fundamentals for Leadership*, available from SEI/PDIC, should be acquired and read thoroughly. During the study process, the following areas should be covered:

#### 1. DIVING PHYSICS

The physical relationships between the diver, the equipment and the environment.

The Boyle's Law relationships between depth, pressure and volume including terms used in figuring pressures and how to compute volumes as depths and pressures change. How to compute air consumption should be included. Archimedes's Principle should be studied and the student must be able to explain the effects of depth and pressure change on buoyancy. The effects underwater on light and sound are also important areas to study as are the effects explained by Dalton's and Henry's Laws.

#### 2. DIVING PHYSIOLOGY

Skin and SCUBA physiological aspects of hyperbaric environments and altered gas partial pressures as well as a comprehensive understanding of the injuries and illnesses associated with skin and scuba diving.

A good course of study includes much of the terminology used in diving medicine. An understanding of the functions relating to diving on the ears, sinuses, lungs and circulation system are important. Knowledge of how the air we breathe enters the body and is used, leads you to better understand the causes, symptoms, prevention and treatment of air embolism, decompression sickness and other related diving maladies.

#### 3. DECOMPRESSION THEORY AND DIVE TABLES

An understanding of the theory of decompression sickness should be included. Knowledge of this area helps you understand and use the decompression and repetitive dive tables. The diving tables should be familiar and used with ease. The exams used for all leadership levels in SEI/PDIC are based on use of the SEI/PDIC Air Diving tables. Again, assisting entry-level students is an excellent way to keep this knowledge current. A thorough understanding of dive computers is required and the proper use of Nitrox in recreational diving must be learned.

#### 4. THE ENVIRONMENT

Study in this area should include a beginning knowledge of currents, and dangerous marine life. Also a basic understanding of both fresh and salt-water environments should be included. Regional laws effecting the skin and scuba diver should be studied.

#### 5. EQUIPMENT

Characteristics of diving equipment is a must for study. This includes a general understanding of the function of required scuba leadership equipment (found in definitions section of the SEI/PDIC Standards and Procedures Manual). Normal maintenance and trouble shooting of these items should be included in your study. A Divemaster/Dive Supervisor is often called upon to make minor repairs.

#### 6. MEDICAL ASPECTS

An understanding of the cause, symptoms, prevention and treatment for the diving injuries and illnesses is required for Divemaster/Dive Supervisor s as well as Assistant Instructors.

#### 7. FIRST AID

The Divemaster/Dive Supervisor should begin a study of the First Aid for aquatic injuries, barotrauma and decompression sickness and other diving related maladies.

A general knowledge of these subject areas is important. As the Divemaster/Dive Supervisor and Assistant Instructor continue to progress toward Instructor, these subjects must be expanded. In addition to a general knowledge, the Instructor candidate must know greater detail of each subject area as well as new areas of study.

### **INSTRUCTOR and CROSSOVER INSTRUCTOR**

An Instructor for SEI/PDIC has in depth knowledge of all areas of recreational scuba diving and is able to relay this information to students of entry level, advanced and specialty programs. However, many of the specialty courses require additional study and knowledge.

If the prospective Instructor has followed along the path presented here, the additional amount of studying required prior to the Instructor Testing Institute may be minimized. However, additional subject areas are included in the requirements and those areas presented in the Divemaster/Dive Supervisor and Assistant Instructor programs are expanded into greater depth and detail. The required classroom and pool teaching hours will also help the Assistant Instructor build teaching skills.

If your test score in Assistant Instructor was near the 80% mark, you should look over the weak topics in that test and promote additional study in those areas. An 80% score at A.I. will equate to an unacceptable score at the Instructor Institute without further study.

The following is a study outline for Instructor Candidates:

## 1. PHYSICS

### a. LIGHT:

- Behavior, refraction, absorption, reflection
- Speed changes in water and in air
- Size and distance relationships in water
- Color absorption at depth
- Beam angle (night dives)

### b. SOUND:

- Speed and behavior from air to water
- Sound and hearing underwater

### c. HEAT:

- Heat transfer characteristics in air and water
- Convection, radiation, conduction

### d. BOYLE'S & CHARLES' - AMONTON'S LAWS (the general gas law):

- Meaning and statement of the laws
- Understanding depth/pressure/volume/temperature relationships
- Compute pressures, volumes & temperatures using these formulas

$$\frac{D_1 + 33}{D_2 + 33} = \text{ATA} \quad \frac{P_1 V_1}{T_1} = \frac{P_2 V_2}{T_2}$$

- Pressure/volume relationship as depth increases
- Understand .445 psi, .432 psi, absolute pressure, gauge pressure, atmospheric pressure, partial pressure, hydrostatic pressure

### e. ARCHIMEDES' PRINCIPLE:

- Meaning and statement of the principle
- Weights of water: fresh and salt
- Compute lifting force of air underwater and volumes required
- How breathing volume relates with the buoyancy compensator to achieve neutral buoyancy underwater

### f. DALTON'S LAW:

- Meaning and statement of the law
- How individual gases in a mixture affect a diver on the surface and at depth
- The relationship between Dalton's, Henry's and Boyle's laws and the effects they cause to divers

### g. HENRY'S LAW:

- Meaning and statement of the law
- Effects of gas absorption in liquid
- How pressure changes affect these absorption levels

*Note: The English version of the tests use English measure. A person with a metric background may have difficulty with some of the physics calculations.*

## 2. PHYSIOLOGY

### a. CIRCULATION, RESPIRATION and CNS:

- Pulmonary ventilation process and anatomy
- Blood transport of gases
- Gas exchange in tissues
- Hypoxia & Hypercapnia
- Asphyxia & Suffocation
- Carbon Monoxide

- Breathing resistance & dead space
  - Hyperventilation & breath-holding
- b. EFFECTS OF PRESSURE AND BAROTRAUMA:
    - Descent effects on air spaces including Ears, Sinus, Lungs & Teeth
    - Ascent effects on air spaces including Lungs, Sinus, Ears, Intestines
    - Nitrogen absorption & elimination
    - Nitrogen narcosis
    - Oxygen toxicity
  - c. EFFECTS OF TEMPERATURE:
    - Thermal protection
    - Hypothermia effects & First Aid
    - Hyperthermia effects & First Aid
  - d. SKELETAL AND NERVOUS SYSTEMS:
    - Anatomy
    - Terminology
    - Relation to Decompression Illness problems
3. MEDICAL ASPECTS:  
CAUSE, MECHANISM, SIGNS & SYMPTOMS, FIRST AID & TREATMENT, AND PREVENTION of:
    - a. PULMONARY BAROTRAUMA:
      - Arterial Gas Embolism (AGE)
      - Mediastinal Emphysema
      - Subcutaneous Emphysema
      - Pneumothorax
    - b. DECOMPRESSION SICKNESS/ILLNESS:
      - Causes, prevention, symptoms,
      - Emergency care and treatment
    - c. INERT GAS NARCOSIS.
  4. EQUIPMENT:
    - a. SCUBA CYLINDERS:
      - (1) Materials & Types
      - (2) Working pressures/capacities
      - (3) Markings
      - (4) Hydrostatic test
      - (5) Visual inspection
      - (6) Maintenance
    - b. SCUBA CYLINDER VALVES:
      - (1) Types: "J", "K", "DIN"
      - (2) Safety burst disk
      - (3) Maintenance
    - c. REGULATORS:
      - (1) Function
      - (2) Mechanics
        - First stage: diaphragm, piston
        - Second stage
        - Alternate air source second stage
      - (3) Care & Maintenance
      - (4) Troubleshooting

- d. BUOYANCY COMPENSATORS:
    - (1) Uses
    - (2) Styles
    - (3) Care & Maintenance
    - (4) Weighting Systems
  - e. INSTRUMENTATION:
    - (1) Depth gauges
    - (2) Time monitors
    - (3) Dive computers
  - f. ENVIRONMENTAL PROTECTION:
    - (1) Dive skins
    - (2) Wet suits
    - (3) Dry suits
    - (4) Gloves
5. DECOMPRESSION THEORY AND REPETITIVE DIVE TABLES:
- a. HISTORY AND DEVELOPMENT OF TABLES
  - b. USE OF AIR DECOMPRESSION TABLES
  - c. REPETITIVE DIVE TABLES
  - d. USE & UNDERSTANDING OF SEI/PDIC Air DIVING TABLES
6. ENVIRONMENT & MARINE LIFE:
- a. WATER ENVIRONMENT:
    - (1) Weather
    - (2) Waves
    - (3) Currents
    - (4) Visibility
  - b. AQUATIC ANIMALS:
    - (1) Stings & bites
    - (2) Non-venomous/venomous
7. PSYCHOLOGICAL ASPECTS OF DIVING:
- a. STRESS AND PERFORMANCE IN DIVING:
    - (1) Definitions
    - (2) Stressors and perceptions
    - (3) Physiological responses
    - (4) Behavioral responses
  - b. TREATMENT OF EXCESS STRESS:
    - (1) Responding to a problem
    - (2) Stress control
8. FIRST AID & ACCIDENT MANAGEMENT:
- a. DIVER RESCUE AND ACCIDENT MANAGEMENT (DRAM):
    - (1) Cognizance
    - (2) Assessment
    - (3) Rescue
    - (4) Evacuation

- b. GENERAL FIRST AID:
  - (1) Airway
  - (2) Breathing
  - (3) Circulation
  - (4) Hemorrhage
  - (5) Shock
  
- c. INJURIES:
  - (1) Burns, infections
  - (2) Spine, head, neck
  
- d. BAROTRAUMA:
  - (1) Squeezes
  - (2) Ears, sinus, vertigo
  - (3) Lung over-expansion
  
- e. DECOMPRESSION SICKNESS/ILLNESS.
  - (1) Oxygen administration
  - (2) Fluids
  - (3) If in doubt, send injured diver to hospital

9. TEACHING TECHNIQUES:

- a. HOW PEOPLE LEARN
  
- b. HOW TO PRESENT MATERIAL IN THE CLASSROOM  
(See *Diving Fundamentals for Leadership*)

10. SEI/PDIC STANDARDS & PROCEDURES:

Section 2 of the SEI/PDIC Standards and Procedures Manual should be read and studied by Instructor candidates. They must fully know the standards that apply to all levels of programs. This includes requirements for training hours, specific skills and subjects that must be taught during each program.

## STUDY QUESTIONS

These study questions provide examples for the level of knowledge that is required for leaders in the SEI/PDIC Program. Use this study guide to determine the areas where you may need extra study.

*Note: While all this information is required knowledge at the Divemaster/Dive Supervisor, Assistant Instructor and the Instructor level, those questions that are specifically Instructor level are marked "\*" . An SEI/PDIC Instructor should not only be able to understand the principles behind these questions but should be able to teach material related to these questions.*

### PHYSICS

1. What scuba diving principles are explained by these laws of physics?  
Boyle's Law; Amonton's Law (or Charles' Law); Dalton's Law; Henry's Law; Archimedes Principle.
2. In fresh water at sea level, a pressure of one atmosphere "gauge" is reached at a depth of \_\_\_ feet.
3. The greatest rate of pressure/volume change occurs in what depth range?
4. In the ocean, a bubble of air with a volume of 6 cubic inches at 99 feet will have what volume at 33 feet?
- 5.\* In the ocean, an inverted bucket contains one quart of air at 90 feet. What will be the volume of air at 30 feet?
6. What are the weights of a cubic foot of salt and fresh water?
7. An object at 70 feet in fresh water weighs 200 pounds. How many cubic feet of air will be required to lift the object?
8. A diver is at a depth of 100 feet wearing a wet suit. She has compensated for her weight at that depth using her floatation device. What must she do to maintain a 30 ft/min or slower rate of ascent?
9. A 64-pound solid object is placed in seawater. Will it tend to float or sink?
10. A solid object that has a volume of 3.3 cubic feet and weighs 311 pounds in air will weigh \_\_\_ pounds when placed in seawater.
11. A diver displaces 3.5 cubic feet, in fresh water and he needs 15 pounds of weight to achieve neutral buoyancy. How much weight will be required in seawater under the same conditions and depths?
12. A scuba cylinder, after a hot fill, cools 40 degrees (F) in the water. What is the approximate pressure drop?
13. What are the effects on light as it travels through the air/water interface?
14. If a diver has a surface air consumption rate of 1/2 cubic foot per minute, then 70 cubic feet of air will last \_\_\_ minutes at 33 FSW.
- 15.\* If a diver's breathing rate is .5 cubic feet per minute at the surface, how long will a scuba cylinder containing 80 cubic feet of air last at a depth of 66 FSW? and at 40 FSW?

- 16.\* A diver breathes 2 cubic feet of air per minute at the surface. If he has a 80 cubic foot cylinder, his air will last approximately \_\_\_ minutes at 66 FSW.
- 17.\* An aluminum cylinder that holds 80 cubic feet at 3000 psi is used. At the start of the dive, the pressure reading is 2500 psi. After diving for 30 minutes at 33 feet the pressure now reads 1500 psi. What is this diver's surface rate of consumption in cubic feet per minute?

*Note: Questions 14 through 17 use cubic feet per minute. SEI/PDIC Instructors should also understand psig per minute as well as the rate of volume moved as it applies to air use beyond direct breathing at depth. This includes use in the BC and the air needed to safely ascend from depth.*

- 18.\* What is the partial pressure of the oxygen (expressed in atmospheres absolute) in air if breathed at depths of 99 FSW or 297 FSW?
- 19.\* What is the absolute partial pressure of nitrogen in air at a depth of 50 FSW?
- 20.\* What is the partial pressure in atmospheres absolute of oxygen in a mixture of air at the depth of 25 and 33 FSW? Why is it important that we understand this?
- 21.\* A small car has run into the lake. If it weighs 1800 pounds and displaces 11 cubic feet, what size lift equipment will be needed to retrieve it and how much air will be needed?

#### PHYSIOLOGY/MEDICAL ASPECTS

22. The best treatment for nitrogen narcosis is:
23. Breath holding or having air trapped in the lungs on ascent while using scuba can cause:
24. Symptoms of decompression sickness (type I and type II) include:
25. If an eardrum were to rupture underwater, how might the diver describe the effect?
26. How does mask squeeze occur?
27. A skin diver with blood in the mask has probably experienced:
28. A scuba diver may develop an excess of carbon dioxide by:
29. Pneumothorax, Mediastinal Emphysema and Subcutaneous Emphysema can be caused by:
30. How do symptoms of Decompression Sickness and those of Arterial Gas Embolism differ?
- 31.\* Explain the mechanism involved in the occurrence of a pneumothorax while diving.
- 32.\* The central nervous system consists of what parts?
- 33.\* Controlled Breathing can be used in skin diving to prolong down time. Why does this work and what are the dangers of Controlled Breathing and/or deliberate Hyperventilation?

- 34.\* Describe the process of respiration from the 'need to breathe' through oxygen arriving in the blood.
- 35.\* What are the possible effects if a diver were to reduce breathing rate and volume (skip breathing) to conserve his air supply?
- 36.\* What are the risk factors that increase a diver's chance of decompression sickness?
- 37.\* Why should a person that has suffered respiratory and circulatory disorders not be a candidate for scuba diver training?
- 38.\* What are possible effects and symptoms for a diver at depth using an elevated level of oxygen in his breathing air?

### ENVIRONMENT

- 39.\* What are the mechanics of wave action that lead to surf?
- 40.\* Describe tide effects including rip tide.
- 41.\* The primary piece of equipment used in Ice Diving that is not needed in most other environments is:
42. Describe the temperature layers of a confined body of water.
43. Anyone trained to dive in the extreme cold conditions of the Great Lakes in the winter months can obviously dive with ease in all kinds of diving in the tropics without further training. (true/false)

### FIRST AID

44. Upon reaching an unconscious non-breathing diver at the surface of the water, your first action should be to:
45. The best possible first aid for an air embolism victim that is breathing with a pulse is:
46. In which area of the body is the rescuer most likely to detect a pulse?
47. What might be the affect on pulse rate if the near-drowning victim was submerged in cold water?
48. Outline the steps you would take as Divemaster/Dive Supervisor if a diver in your group contacted a stinging hydroid and now, 10 minutes after the dive, experiences breathing difficulty.
- 49.\* In what position should a suspected Air Embolism/Bends victim be placed for first air procedures? What would those procedures include?
50. What is the breath-to-compression rate and ratio you should use when performing CPR as a single rescuer on an adult?

### STRESS AND PSYCHOLOGICAL ASPECTS

51. The best way to control your elevated stress during a dive incident is to:

52. Describe the effect called Perceptual Narrowing.

53.\* List three signs that you might observe, serving as a Divemaster/Dive Supervisor, in a diver about to enter the water that would indicate to you that elevated stress is present in that diver.

54.\* An anxious student is at 47 feet on a ship wreck. He is holding tightly to a piece of the wreck with a fixed stare. What should be your actions?

#### DIVE TABLES and DECOMPRESSION

*Note: Written testing at all levels of leadership in the SEI/PDIC Program requires a full understanding of the SEI/PDIC Air Diving Tables.*

55. The SEI/PDIC Air Diving Tables specify a minimum surface interval of \_\_\_ minutes.

56. Pain from decompression sickness occurs most frequently in what area of the body?

57. A student asks you how long a scuba diver must remain on the surface prior to flying home on a commercial airliner after making a single dive (multi-day dives, decompression dive, etc.) Your answer should be:

58. In an attempt to avoid decompression sickness, a diver should monitor what three aspects of a dive?

59. Describe a surface interval:

The five common types of dive table problems each SEI/PDIC Instructor should understand are:

- a. Find the maximum no-decompression time for a single dive.
- b. Calculate the second dive profile options.
- c. Calculate the third dive profile options.
- d. Calculate the surface interval between two planned dives.
- e. Calculate required decompression stops for an excessive dive made in error.

Solve the following problems using the SEI/PDIC, Air Diving Tables:

60. First dive 82 feet for 18 minutes.  
Surface interval is 1 hour 20 minutes.  
Second dive is planned to 63 feet.  
What is the Maximum 'no-stop' time allowed?

61. First dive is 80 feet for 20 minutes.  
Surface interval is 1 hour.  
Second dive is 70 feet for 20 minutes.  
Surface interval is 4 hours.  
Third dive is planned for 60 feet.  
What is the Maximum 'no-stop' time allowed?

62. First dive is 75 feet for 30 minutes.  
What is the Minimum surface interval to make a second dive for 100 feet for 10 minutes?
63. A buddy pair starts their first dive of the day at 9:20 am and goes to 83 feet for 10 minutes. A second dive started at 11:30 am and went to 68 feet for 15 minutes. What surface interval will permit these divers to make a third dive to 55 feet for 30 minutes without required decompression stops?
64. First dive is 40 feet for 60 minutes.  
Surface interval is 45 minutes.  
Second dive is 100 feet for 8 minutes.  
What should be the ascent profile from the last dive according to the SEI/PDIC recommendation?
65. A pair of divers makes their first dive to 90 feet for 15 minutes then spends 1 hour on the surface. How long will they be able to stay on a second dive to 70 feet without required decompression stops?
- 66.\* A buddy pair planned to go to 90 feet for 25 minutes but discovered at 20 minutes into the dive that they had descended to 120 feet. What is the SEI/PDIC recommendation for solving their dilemma?

#### GENERAL DIVING SAFETY

67. If you become separated from your buddy during the dive, you should:
68. Your regulator begins to free flow uncontrollably. List the action you should take if diving with a buddy in 60 feet of water under ice 100 feet from the exit hole.
69. To avoid mask squeeze during a dive you should:
70. Signs of apprehension before a dive are recognized by the buddy as:
71. What direction should divers start their travel during a dive when diving from an anchored boat in a current?

#### EQUIPMENT

72. A standard J-valve cylinder used properly will reserve approximately how much air?
73. The intermediate pressure in most SCUBA regulators is set to about \_\_\_ psig above ambient.
74. Describe the markings on a Aluminum cylinder that show the following: CTC/DOT 3AL 3000 P132546
- 4      71  
      83    18
- 75.\* Scuba cylinders are hydrostatically tested to what proportion of their rated pressure?
- 76.\* A diver notices a major pressure fluctuation on his gauge each time he breathes. What could be the problem?

77.\* How do you tell, without tools, which stage of a regulator has the problem when a seeping free flow starts before a dive?

### TEACHING TECHNIQUES

78.\* To best reach all students, a single instructor teaching a large class must adjust his teaching level to which students? Gifted, Slow, Middle group, those most interested.

79.\* Why are visual aids important when teaching in the classroom?

80.\* How do visual aids impact learning retention?

### SEI/PDIC STANDARDS

81.\* What must a SEI/PDIC Instructor do to complete the annual renewal?

82.\* How many open water dives are required to complete the SEI/PDIC Open Water Plus class?

83.\* How many students may a SEI/PDIC Instructor have in a pool session without additional assistants?

84.\* How many students may a SEI/PDIC Instructor have during basic open water training if using one Assistant Instructor under ideal conditions?

85.\* What is the maximum instructor-to-student ratios in classroom, pool, and open water for an instructor working alone?

86.\* Who should a SEI/PDIC Instructor contact to obtain assistance and advise dealing with a difficult teaching situation?

87.\* How many students must an instructor certify to meet minimum annual renewal requirements?

88.\* A complaint concerning breach of standards by another SEI/PDIC Instructor should be documented in writing and sent to whom?

## **SKILL PREPARATION AND REQUIREMENTS**

There is no replacement for being comfortable in the water. A diver who has good swimming skills and is at a good level of swimming fitness will find the skill requirements in leadership training at any level are not difficult. Passing an entry level or advanced scuba course requires only moderate swimming skills. The prospective leadership candidate might consider one of your local aquatic facilities' advanced swimming classes in preparation as leadership skill requirements are at a higher level.

Lifeguard training is recommended as good skill training for swimming skill in addition to the value as it relates to DRAM Rescue Diver training. At the very minimum, you should engage in a program of swimming workouts where the swim distance reaches 300 yards or more.

Every student, regardless of skill level, is well advised to practice each skill listed in this section before an institute session. Skills like basic swimming agility, mask clearing and Surface Entry and Don Equipment (formerly bailout) readily show the course Director the aquatic level of the student.

Institute skill requirements for Divemaster/Dive Supervisor, Assistant Instructor; and Instructor (Crossover), are covered here.

### **PURPOSE AND RATIONALE**

SEI/PDIC leaders should have pool skill levels above those required of the classes they teach. They should be both proficient at skills and comfortable in the water. The skills presented here will enhance that comfort and skill level.

## DIVEMASTER/DIVE SUPERVISOR POOL/CONFINED WATER SKILL TESTING

1. Proper assembly of scuba equipment.
2. Swim 400 yards without equipment (goggles acceptable)
3. Demonstrate Giant Stride Entry
4. On the surface complete the following:
  - a. Removal and replacement of scuba unit
  - b. Removal and replacement of weight system
  - c. Regulator snorkel exchanges
  - d. Surface snorkel swimming with full scuba equipment 100 yards
5. Exit pool using ladder with fins in hand and mask in place of boarding a boat
6. Perform a Water Entry and Don with scuba (Bail-in)
7. Underwater complete the following:
  - a. Removal and replacement of scuba unit
  - b. Removal and replacement of weight system
  - c. Regulator retrieval and clearing
  - d. Swim underwater 50 yards without mask, replace and clear mask
  - e. Remain neutrally buoyant underwater for at least 3 minutes with minimal motion
8. Demonstrate proper out-of-air emergency alternatives as follows:
  - a. Buddy Breathe to the surface:

Two students with complete scuba equipment are underwater, separated a minimum of 50 feet. Student A takes a breath from his scuba and then swims without air to student B and gives the "out-of-air/share air" sign to student B. Student B offers his primary second stage and the two divers ascend to the surface buddy breathing (buddy breathing may be simulated).
  - b. Octopus Breathe a distance of 100 yards:

Two students with complete scuba equipment are underwater, separated a minimum of 50 feet. Student A takes a breath from his scuba and then swims without air to student B and gives the "out-of-air/share air" sign to student B. Student B offers his primary second stage (or alternate air source) to Student A (the "distressed diver") and then uses his own octopus (if donating the primary second stage) then swims 100 yards using octopus breathing.
9. Demonstrate assistance to a distressed diver on the surface.
10. Demonstrate Deep Water Exit at pool-side removing scuba, exit pool and lift scuba out while wearing Mask, Snorkel and fins.

*Note: If Buddy Breathing is to be simulated see Policies and Procedures, for details.*

## **ASSISTANT INSTRUCTOR POOL OR CONFINED WATER SKILL TESTING**

These standards are used as the basis for Assistant Instructor certification.

### SKILL 1: SWIMMING PROFICIENCY

Swim 400 yards without use of equipment. Swim goggles are allowed. Candidate should be advised to use a variety of strokes, and no more than 75 yards should be done on the back. A candidate for leadership training should possess good swimming skills.

### SKILL 2: SKIN DIVING

Place mask and snorkel in the deep end of the pool. Wearing fins, execute a giant stride entry from the edge of the pool and surface swim to a point 40 feet away from the mask and snorkel. Surface dive and swim underwater to the mask and snorkel. Recover and clear mask and clear snorkel at surface. Mask must be clear and candidate should be breathing through the snorkel at the surface. A candidate for assistant instructor should have a skill level beyond that of basic open water.

### SKILL 3: SCUBA 1

Student enters pool from edge carrying all scuba equipment. (Weight belt may be worn to achieve neutral buoyancy.) Air is turned on before entry. Student dons all equipment at the bottom of the pool, adjusts his buoyancy and swims 50 yards underwater. Upon returning to the deep end of the pool, student will ditch scuba unit only and execute a lateral swimming ascent to the surface. Student may not use the side of the pool and within 15 seconds will return to a position over scuba unit, execute a surface dive, recover and don scuba unit. With all air out of BC, student should surface and tread water for 5 minutes. Student may have no air in BC and must retain weight belt. After 5 minutes, candidate will orally inflate BC to achieve positive buoyancy, surface doff scuba unit and execute a deep-water exit. A student for Assistant Instructor should have control over his equipment and buoyancy needs, as well as skills such as surface dives and deep-water exits.

### SKILL 4: SCUBA 2

Candidate buddy teams enter the water using a giant stride or back roll entry. Team executes a vertical descent to the bottom of the pool. Once on the bottom, candidates exchange proper signals and begin to buddy breath from a single second stage for 200 yards. (Buddy breathing may be simulated) After 200 yards, the candidates reverse roles and buddy breath for an additional 200 yards. Candidates should maintain good control of air supply and buoyancy during the exercise. This exercise is not timed. After completion of 400 yards total, candidates make a proper vertical ascent, and exit pool with fins in hands and mask in place. A candidate for assistant instructor should be able to maintain control in an out of air situation for an extended period of time.

*Note: If Buddy Breathing is to be simulated see Policies and Procedures, for details.*

## **POOL OR CONFINED WATER SKILLS FOR INSTRUCTOR AND INSTRUCTOR CROSSOVER TESTING**

### **SKILL 1: SWIMMING/SKIN DIVING PROFICIENCY**

Swim 400 yards without use of equipment. (Swim goggles are allowed.) Candidate should be advised to use a variety of strokes, and no more than 50 yards should be done using the elementary backstroke. After the 400-yard swim, the candidate will tread water/survival float for 10 minutes without swimming aids. Immediately after completing the tread/float, the candidate will don mask, snorkel and fins, (candidate may be allowed to sit on pool deck to don equipment) then swim 200 yards using mask, snorkel and fins. During the skin diving equipment portion of this skill, both headfirst and feet-first surface dives and at least three different fin kicks will be demonstrated.

### **SKILL 2: SKIN DIVING PROFICIENCY**

Place mask, snorkel and fins at the bottom of the pool. (A weight or pool brick may be used to keep equipment in place.) The candidate executes a giant stride entry from a position above gear and swims on surface to a position 40 feet from the skin diving gear. Within 30 seconds, the candidate is to execute a surface dive, then swim 40 feet underwater and recover mask, snorkel and fins. Upon reaching the surface, the mask must be clear, the snorkel breathable and the fins worn.

### **SKILL 3: SCUBA PROFICIENCY 1**

Candidate enters pool from edge carrying all scuba equipment. Weight belt must be carried and not worn across the chest or attached to another piece of equipment. Don all equipment. Adjust buoyancy and swim 50 yards underwater. Upon return to the deep end, ditch scuba equipment, (weight belt may be retained or left on the bottom), and execute a lateral swimming ascent. Within 30 seconds, execute surface dive and recover and don all equipment. Remove all air from the BC and execute a vertical ascent and tread water for 5 minutes. Candidate must retain weight belt, have no air in BC and not use snorkel or regulator. After 5 minutes, orally inflate BC sufficiently for positive buoyancy, surface doff equipment and execute a deep-water exit.

### **SKILL 4: SCUBA PROFICIENCY 2**

Two candidates execute giant stride entries from the edge of the pool, and perform normal descent to the bottom. After both have settled to the bottom, divers exchange hand signals with one diver indicating "out of air". Candidates begin to buddy breathe (Buddy breathing may be simulated) and swim 50 yards underwater sharing air from a single second stage. At the end of 50 yards, while continuing to buddy breathe, candidates exchange scuba units. After the exchange is made, candidates reverse roles, and buddy breathe for an additional 50 yards. Candidates again swap gear while buddy breathing. Returning to their own scuba unit and using BC and breath control, candidates assume a neutral buoyancy position mid-water for 3 minutes. Minimum motion should be used to maintain orientation and position in the water. After 3 minutes, candidates should make a normal vertical ascent and exit the pool with fins in hand and mask in place.

### **SKILL 5: DIVER EMERGENCY 1**

Candidate must recover an unconscious diver from the bottom of the pool. The victim will be unresponsive and unmoving. Candidate must execute a proper DRAM Rescue recovery lift from the bottom of the pool as illustrated in the SEI/PDIC DRAM Manual. Once on the surface, the candidate must establish positive buoyancy for victim and himself and initiate rescue breathing with two breaths. (The candidate is to simulate rescue breathing by mouth to cheek or mouth to chin breathing.) The victim must be towed 25 yards while rescue breathing is maintained, (one breath every 5 seconds). Gear is to be stripped while towing as rescue breathing is maintained. After 25 yards, at the edge of pool, candidate will finish stripping gear from victim and himself while maintaining rescue breathing. Candidate will demonstrate how victim would be removed from the pool to the deck for CPR if needed. (To avoid possible injury the victim may exit pool on his own).

**Note:** When conducting rescue breathing, the rescuer will simulate rescue breathing by placing mouth against cheek or chin and roll the 'disabled diver' toward the rescuer. Simulated mouth-to-snorkel (with non-valved snorkel) rescue breathing may be used at candidate's option.

## SKILL 6: DIVER EMERGENCY 2

The candidate should approach the active victim on the surface using a heads-up swim wearing full scuba equipment and maintain a safe distance while encouraging self-rescue. (The victim will be unresponsive, have mask on forehead, regulator out of mouth, use arms to struggle but with elbows in the water and have no air in BC.) The candidate should make a submerged approach, and remove victim's weights and/or inflate the BC to achieve positive buoyancy (target of opportunity). Control may then be established using victim's and rescuer's gear. The candidate will communicate with the victim and the exercise ends when the candidate has the victim under control.

## **EVALUATION OF THE POOL or CONFINED WATER SKILLS**

To pass, a student/candidate must successfully complete all skills as outlined. Should a student do poorly on the first try, additional tries will be granted as time allows. A makeup session may be required.

### Point System and Description of Evaluations

**0 Point:** Student did not complete skill. This includes surfacing for a breath during skin gear recovery, surfacing during underwater skills, and discontinuing buddy breathing.

**1 Points:** Student completed skill but with difficulty. Difficulty includes loss of equipment control, excessive movement across the bottom during skills, loss of buoyancy control during a skill and not exhaling during times the regulator is not in the mouth. This is the minimum point score for passing the Divemaster/Dive Supervisor or Assistant Instructor course.

**2 Points:** Student completes the skill easily. Student exhibits good control of equipment, maintains control of buoyancy and position in pool and always exhales when the regulator is not in his mouth. Student could easily demonstrate skill to basic open water students. This is the minimum point score for passing the Instructor course.

**3 Points:** Student shows exceptional mastery of the skill achieving Demonstration Quality. Each movement is performed slowly and deliberately as if demonstrating to an entry-level class.

In addition, during Instructor and Crossover, pool-side lectures will be given by the candidates. One topic will be assigned by the Institute Director prior to the course/institute and an additional subject at the Institute. Evaluation of these presentations uses criteria similar to those used for classroom lectures. For more information, see *Diving Fundamentals for Leadership*: "Learning How to Teach".

## **REQUIRED OPEN WATER TRAINING**

Open water training is required for each level of leadership. The skill testing is progressively more difficult at each level. Therefore, students are advised to practice each skill prior to each of the courses.

### **DIVEMASTER/DIVE SUPERVISOR**

A minimum of five dives is required to complete the open water portion of the Divemaster/Dive Supervisor course. Dive #1 involves skill testing of the Divemaster/Dive Supervisor student. During Dive #2 the student leads an Open Water diver student on a tour under the “direct supervision” of the Instructor. Dives #3, 4 and 5 involve the Divemaster/Dive Supervisor student in many areas of responsibility. Details of these dives are listed below.

#### **Dive #1: Skill evaluations, Personal diving skills.**

- a. Equipment handling, entries, controlled descents and ascents.
- b. Surface removal and replacement of scuba equipment.
- c. Surface removal and replacement of weight system.
- d. Perform controlled descents, ascents, and achieve neutral buoyancy.
- e. Remove, replace and clear mask.
- f. Respond to a diver out of air using buddy breathing and octopus breathing ascents.
- g. Swim 50 yards underwater without mask while neutrally buoyant.
- h. Knot tying and line handling.
- i. Underwater problem solving (loose tank strap, simulated entanglement, etc.)
- j. Retrieve a simulated unconscious submerged diver from 30 feet in depth.
- k. Rescue a surface struggling diver.

#### **Dive #2: Lead a student training dive under the direct supervision of the Instructor including briefing and debriefing.**

- a. Demonstrate proper placement and positioning of the Divemaster/Dive Supervisor underwater when assisting an Instructor.
- b. Lead a dive tour

#### **Dives #3, 4 & 5: Supervise dive groups from the following list under direct supervision of an Instructor:**

- a. Night dive
- b. Drift dive
- c. Limited visibility dive
- d. Beach or shore based dive
- e. Cold water dive
- f. Diving in a current
- g. Boat diving

During these dives the Divemaster/Dive Supervisor student is to complete the following duties:

- (1) Assume responsibility for the dive operation
- (2) Make an attendance list for head count purposes and for post-dive and departing dive-site roll calls
- (3) Check certification and logbooks to determine whether divers are qualified to make the proposed dive(s)
- (4) Perform a pre-dive check of the divers' gear to determine its condition; instruct divers where and how to stow gear whenever necessary
- (5) Assign safety people to help divers in and out of the water
- (6) Assign a buddy system when necessary and insure that it is followed
- (7) Give a pre-dive briefing (10 to 15 minutes) covering these topics
  - (a) Depth
  - (b) Water conditions (visibility, current, temperature, etc.)
  - (c) Underwater obstacles
  - (d) Air rules

- (e) Any extra safety steps needed
- (8) Review the dive plan and no-decompression stop limits
- (9) Have all safety equipment operative and in place, including down line, trail line, current line, and rescue buoy and line
- (10) Have emergency contact information ready (police, fire department, ambulance, Coast Guard, recompression chamber, rescue units, and hospital)
- (11) Have first aid kit and oxygen (recommended) ready and in place
- (12) Assume the responsibility of refusing a diver permission to dive where it may prove to be unsafe
- (13) Lead the dive

## **ASSISTANT INSTRUCTOR**

A staff briefing takes place at the dive site that prepares the students for the experience. This briefing will include a detailed description of the underwater terrain, as some may not have made a dive at the location.

Each candidate is assigned to a staff instructor who will perform as an entry-level student during one dive while evaluating that student. It should be remembered that entry-level scuba students would have completed their initial open water experience including class briefing and skill evaluations before being given to an Assistant Instructor for a tour dive.

The required open water skills for Assistant Instructor are composed of 3 task areas:

- 1. At 20 feet in depth, the student is to remove, replace mask and clear; make a controlled buddy breathing ascent (may be simulated).**
- 2. Perform a simulated rescue of an unconscious diver from 20 feet in depth. Stabilize on the surface; tow 50 feet while performing simulated mouth-to-mouth (or snorkel) resuscitation.**
- 3. Receive instruction from staff in handling a student tour dive including pre-dive briefing. Perform a guided tour with the instructor acting as a student.**

The Assistant Instructor Dive Tour Briefing Plan should include:

1. DIVE PLAN:
  - Direction
  - Depth
  - Expected duration
  - Underwater sights
2. SAFETY ITEMS:
  - Importance of equalizing ears
  - Lost diver procedure
  - Hand signals
  - Swim position in relation to leader
  - Safety check of equipment
3. OBJECTIVES OF THE DIVE:
  - Air consumption/proper breathing rate
  - Buoyancy control
  - Student diver confidence and self control

## **INSTRUCTOR**

### **CANDIDATE/STUDENT DIVE:**

For the open water section of the Instructor Institute, each candidate is assigned to a qualified staff instructor, acting as a "student" for completion of skills and evaluation. The dive experience should be completed in four sections:

- 1. Pre-dive briefing by the candidate.**
- 2. A short dive that includes the candidate directing the required student line skills.**
- 3. The handling of a typical student error that results in reaction to an emergency.**
- 4. The post dive debriefing given to the "student".**

### **EVALUATION CRITERIA**

The evaluation guidelines for open water training at all three levels of leadership are like that used in the pool or confined water testing. The same point values, "0" through "3", are used.

## LEARNING HOW TO TEACH

Presenting material to a class requires the instructor to be knowledgeable, well prepared and rehearsed. Many of you will be uncomfortable the first time you step in front of those students. It is natural to be somewhat nervous. The cure is preparation. Practice and experience will also help solve much of this dilemma

In scuba instruction, an ideal training method is to practice teaching short subjects in front of a scuba class. Ask your sponsoring instructor to assign you several 15-minute segments and to critique your presentations. Each presentation will become easier, if you are prepared. Researching the material to present is also an excellent study method to increase your knowledge of the chosen subject. In addition to classroom presentations, you should practice pool and open water presentations.

The Assistant Instructor portion of leadership training is dedicated to "How and What to Teach". You will present two fifteen-minute classroom lectures, two short pool skill briefings and one open water training presentation. The topics will be assigned by the Course Director. A list of possible topics is included later in this section.

You must have a current copy of *Diving Fundamentals for Leadership*. Chapters 15 through 17 of this text cover various aspects of the learning process and teaching methods. The most important areas are "Lesson Planning", "Teaching Methods, Conducting the Class".

As you prepare to enter the Instructor or Crossover Institute, you will be assigned a topic for a formal thirty-minute presentation. This will be a chance to properly use visual aids and prepare the best possible class presentation. Two additional fifteen-minute classroom topics will be assigned. You will also present at least two poolside topics and a full briefing at the open water site. To prepare for the Instructor Institute, you should become very familiar with the *Diving Fundamentals for Leadership* sections on teaching methods.

The poolside topics presented during the courses may be pre-assigned or assigned on the spot. Regardless of how they are assigned, you must organize materials so "Entry Level Students" can understand and progress effectively. Each skill should be explained, demonstrated, then practiced and evaluated. Prepare for students that do not do well and have corrective tactics in mind. Even with pool topics, follow this format: **INTRODUCTION - BODY – CONCLUSION.**

The Evaluation Criteria and Scoring Guidelines are presented in the following pages. The institute staff will help you by using these formats to give a critique after each topic to help you prepare for the next.

## ORAL PRESENTATION GUIDELINES

The ability to communicate with and provide a learning experience for a group of people is a very important. These guidelines will help you communicate clearly and concisely.

1. Prepare a lesson plan.
2. Plan and prepare your presentation so that you use all the time allowed without going overtime or under time. Cover the most important aspects of your topic in the time allowed. Use your time as though it were money and spend it wisely.
3. Take your subject seriously, if you don't, no one else will, including your evaluators.
4. A good attention point helps start your presentation and sets the stage for student attention and learning.
5. Short stories, a bit of humor, a personal experience should be used to enhance the lecture, but only when they emphasize an important point and build on the learning experience.
6. "Tell them what you are going to tell them - tell them about it - tell them what you told them." Use an INTRODUCTION - MAIN BODY - CONCLUSION. Always format every speech in this manner, even a short poolside lecture.
7. Use visual aids to stress a point or communicate more clearly; e.g., charts, blackboards, pictures, equipment, etc. Examples of visual aids to catch interest at the start of a talk are:
  - a. One instructor hands out envelopes containing a dried rose petal, the audience examines the petal while the instructor introduces his topic, "How to Identify Poison Ivy". This is a shocker but also provides something (the rose petal) that represents the poison ivy leaf.
  - b. A first aid instructor demonstrates different types of wounds by using a juicy orange. A razor makes an incision; sandpaper creates an abrasion; a nail gives a puncture; and a screwdriver makes a laceration. The "bleeding" orange is unforgettable.Use visual aids to help you put across a point, but never just for the sake of a show.
8. A good voice and poise help, but enthusiasm and knowledge of the subject are more effective. Always be enthusiastic. If you are not enthusiastic about your subject, the people listening to you most certainly aren't going to be either.
9. Remember these general rules: Maintain eye contact, talk to your audience, raise your voice when you turn away, be correct in what you say and be ready to back it up, watch nervous habits, keep your hands out of your pockets, don't lean on anything, use voice inflection, don't let your sentences die at the end, be interesting and don't you dare have a toothpick in your mouth or chew on gum during a presentation.
10. Personal appearance and mannerisms must support and not detract from your presentation. Dress appropriately to the professional image you are expected to promote.
11. Present facts accurately. Terminology must be correct and the information presented to the students must be well supported.

The "Evaluation Guide" on the next three pages contains the same information on the evaluation form used by your Institute staff during your presentations. Look over these points as you prepare your topic. Your teaching notes used for oral presentations will also be evaluated by the Institute staff. Please provide them with at least two copies.

## CLASSROOM ORAL PRESENTATION EVALUATION GUIDE

The following outline is used to evaluate candidate classroom presentations.  
The comment under each area represents the top score for that area.

### INTRODUCTION

### COMMENT

Name & Subject given:	Name and subject given at beginning of presentation
Outline:	Outline of points and objectives clearly and logically presented
Attention Grabber:	Positively stimulated interest related to the topic

### BODY and INFORMATION

Terminology:	All Terminology correct
Facts:	All facts correct
Content:	All content relates to the subject

### CONCLUSION

Re-cap Main Points:	Well covered
Motivation:	Reason(s) to remember

### ORGANIZATION

Use of Notes:	Notes unobtrusive and not distracting
Flow:	Logical order, good structure
Time Distribution:	Appropriate allocation of time for all points
Use of Time:	Ended within one minute of assigned time
Setup:	All could see easily

### PRESENTATION SKILLS

Poise:	Friendly and relaxed
Enthusiasm:	Enthusiastic and animated
Voice:	Strong and varying
Eye Contact:	Looks at each student
Speech Habits:	No crutch words or bad habits
Training Aid Use:	Used good techniques with appropriate training aids

## POOL ORAL PRESENTATION EVALUATION GUIDE

The following outline will be used to evaluate candidate poolside presentations.  
The comment under each area represents the top score for that area.

### INTRODUCTION

### COMMENT

Name & Subject Given:	Name and subject given at beginning of presentation
Outline:	Outline of points and objectives clearly and logically presented
Attention Grabber:	Positively stimulated interest related to the topic

### BODY and INFORMATION

Terminology:	All Terminology correct
Facts:	All facts correct
Skill Demonstration:	Performed demonstration quality

### CONCLUSION

Re-cap Main Points:	Well covered
Motivation:	Reason(s) to remember covered

### ORGANIZATION

Use of Notes:	Notes unobtrusive and not distracting
Flow:	Logical order, good structure
Time Distribution:	Appropriate allocation of time for all points
Use of Time:	Time use appropriate for subject
Setup:	All could see and hear easily

### PRESENTATION SKILLS

Poise & Enthusiasm:	Friendly, relaxed and animated
Voice & Eye Contact:	Strong and varying, looks at each student
Speech Habits:	No crutch words or bad habits
Control and Safety:	Maintained visual observation of students Positioned to react if needed Designated and used assistants

## OPEN WATER EVALUATION GUIDE INSTRUCTOR

The following outline will be used to evaluate candidate open water performances. The comment to the right of each area represents the top score for that area.

SUBJECT	COMMENT
Awareness of Students:	Detected and addressed potential student problems
Ability to make students feel relaxed:	Friendly, relaxed, positive, enthusiastic
Control of class:	Organized layout, assigned buddies, maintained control
Pre-Dive plan and Briefing:	Introduction, identified objectives, explained rationale
Debriefing of Dive:	Reviewed good/bad, skills, objectives, skill value, log data
Safety Consciousness	
Pre-Dive:	Checked student gear, reviewed emergency actions
During Dive:	Detected stress, resolved problems
Post-Dive:	Detected stress, resolved problems, in control
Reaction to Emergency:	Actions prevented development of a problem
Attitude, Professionalism, Maturity:	Positive, upbeat towards students and diving

## **OPEN WATER DIVE CANDIDATE BRIEFING GUIDE**

These points are considered the minimum coverage for a briefing to an Open Water Diver class and are used as evaluation points by the Institute Staff for the Candidate's open water presentation.

### **DIVE PURPOSE AND OBJECTIVES**

- Reason for open water training
- Overview of the dives
- Making the dives fun and interesting

### **DIVE PLAN:**

- Direction
- Depth
- Expected duration
- Underwater sights

### **SAFETY ITEMS:**

- Importance of equalizing ears
- Lost diver procedure
- Hand signals
- Buoyancy changes during dive
- Student position in relation to leader
- Safety check of equipment
- Accident management plan

### **DEBRIEFING (after the dive):**

- Student enjoyment
- Review what occurred during the dive
- Problems noted and corrected
- Complete logbook

## **LECTURE TOPIC EXAMPLES**

### **15-MINUTE PRESENTATIONS**

Candidates coming to the Assistant Instructor course are to be prepared to present at least one lecture topic. This topic will be assigned by the Director, from the list below, in enough time for preparation. The presentation should not be less than 10 minutes nor exceed 15 minutes. An additional lecture topic will be assigned during the course.

The presentation should include the use of visual aid materials and handouts at the student's option. Bring a copy of your outline to turn in to the staff and enough handouts (if used) to give to each "student" and staff person. All material is to be directed to entry-level scuba students. Below are examples of topics you might be assigned. Be prepared to explain, describe and discuss these topics in presentation format:

- Boyle's Law
- Dalton's Law and the relationship to diving
- Henry's Law in relation to diving
- Hyperventilation
- Air Embolism
- Operation of a regulator
- SCUBA cylinder markings and their meaning
- Ear Squeeze and associated problems
- Archimedes' Principle
- The correct uses for the Buoyancy Compensator
- Underwater vision
- The diving environment in our area
- Decompression Sickness
- The first aid for marine injuries
- The Medical Questionnaire and Statement of Understanding/Waiver & Release used on the first session of an Open Water class

## LECTURE TOPICS FOR INSTRUCTOR and CROSSOVER

Candidates preparing for Instructor Institute will be assigned a final formal 30-minute presentation from the list below. The Institute Director will assign the topic prior to the Institute. This presentation should be the best you can do and should include proper use of visual aids, handouts and other materials. The lecture time must be at least 25 minutes and no longer than 35 minutes.

The topics listed below may require more time than 30 minutes when presented to an entry-level course. If this is the case in the one that is assigned, limit the content to a 30-minute portion of the subject and explain this at the beginning of your presentation. References for planning this presentation may be found in the *Diving Fundamentals for Leadership* sections on teaching methods.

A copy of your outline/teaching notes should be presented to the staff evaluators at the beginning of your presentation. Direct all material to entry-level scuba students. Two additional 15-minute topics will be assigned during the Institute session by the Institute Director. The following are examples of topics you might be assigned.

- Lung over expansion problems
- Decompression sickness and theory
- Repetitive dive tables
- Boyle's Law and squeezes
- Fresh water and sea water marine life
- Hazardous marine life
- Respiration & circulation
- Out of air emergencies
- First aid for marine injuries
- Handling a scuba accident
- Tanks, valves and regulators
- Weather - waves - current - visibility
- Buoyancy control devices and their use
- Buddy system diving and underwater communication
- Scuba course orientation for entry level
- Dive planning

## TYPICAL TRAINING PROGRESS

### From Open Water Diver to Scuba Instructor

This guide is prepared to show an entry-level diver the normal steps in experience and training to advance toward scuba Instructor. Although times and the order may vary considerably due to the availability of training courses, this shows an average recommended progress.

1. Open Water Diver course	8 - 12 weeks	*
2. Open Water training dives	1 weekend	*
3. Advanced Level 2 - 5 training dives	1 weekend	
4. Advanced Level 3 - 5 training dives	1 weekend	
5. 20 additional logged dives.	6 - 8 months	
6. Take SEI/PDIC Master Diver course including 10 dives	8 - 15 weeks	
7. Receive training for Teaching Assistant certification	1 - 2 weeks	
8. Take a CPR course	1 - 2 evenings	*
Take a First Aid course	1 - 2 evenings	*
Take a DAN Oxygen Provider course	4 - 5 hours	*
9. Take a DRAM Rescue Diver course	1 weekend	*
10. Help a scuba Instructor with an Open water Diver class	8 - 12 weeks	
11. Take a Divemaster/Dive Supervisor course	2 - 4 weeks	*
12. Help an Instructor with two certification classes	8 - 20 weeks	*
13. Attend Assistant Instructor leadership training	3 - 4 days	*
14. Assist a SEI/PDIC instructor as an Assistant Instructor	6 months	*
15. Complete a minimum of 60 logged dives prior to entering Instructor Institute, a minimum of 100 total logged dives are required for Instructor certification		*
16. Attend Instructor Institute training	3 to 4 days	*

\* Required training and experience for instructor certification.

## **RENEWAL, INSURANCE & RE-CERTIFICATION**

Leadership level certifications must be renewed annually by December 31. An Instructor also has a liability insurance requirement to remain active. Every three years all Instructors must complete some form of continuing education to be re-certified.

Listed here are the current annual renewal requirements as published in the SEI/PDIC Standards and Procedures Manual. It is well to keep up to date on any changes as they occur through SEI/PDIC Program mailings to all renewed members of the leadership.

### **DIVEMASTER/DIVE SUPERVISOR**

Every SEI/PDIC Divemaster/Dive Supervisor must complete the annual renewal form and submit it with the annual renewal fee to the SEI/PDIC Program office. December 31 is the renewal date. Insurance is available and highly recommended. Divemaster/Dive Supervisors working without the supervision of an Instructor must purchase insurance.

### **ASSISTANT INSTRUCTOR**

1. Every SEI/PDIC Assistant Instructor must complete an annual renewal form and submit it with the annual renewal fee, to the SEI/PDIC Program Office. December 31 is the renewal date. Insurance is available and strongly recommended.
2. To be eligible for renewal, Assistant Instructors must complete one of the following:
  - a. Assist in at least one complete SEI/PDIC course annually, including open water dives.
  - b. Attend or assist at a SEI/PDIC Leadership Institute.
  - c. Attend an approved SEI/PDIC seminar.
  - d. Attend sessions at the annual SEI/PDIC convention.
  - e. Develop approved SEI/PDIC educational resource materials.
  - f. Certify at least 6 Snorkeling for Families students.

### **INSTRUCTOR**

1. Every SEI/PDIC Instructor must complete an annual renewal form and submit it with the annual renewal fee and proof of insurance to the SEI/PDIC Program Office. December 31 is the renewal date. In addition to completing the form, the instructor annually must accomplish one of the following:
  - a. Each Instructor must have taught and certified at least six students since the last renewal date. Certifications may be from entry level, advanced, or specialty courses. Note: Team teaching is permitted for renewal purposes and should be listed on student Certification Forms.
  - b. Attend or assist in a SEI/PDIC Leadership Institute, or attend an approved SEI/PDIC seminar or workshop, or develop approved SEI/PDIC educational resources approved by the SEI/PDIC Program Director, or serve as SEI/PDIC Regional Representative, or as a member of the SEI/PDIC Advisory Committee.
2. Each Instructor must accumulate Continuing Education Credit (CEC) during the previous three years. A list of available credit is located under POLICIES and PROCEDURES, located in the SEI/PDIC Leadership Standards and Procedures Manual, Part III.
3. Instructors who do not meet all Active Instructor requirements may obtain Inactive Instructor status by sending in a renewal form and appropriate renewal fee. The Inactive Instructor will enjoy all privileges of membership (newsletter, certification card, etc.), but will not be allowed to certify or teach SEI/PDIC Divers. Insurance coverage is optional for non-teaching Instructors. However, all Instructors should keep in mind what claims-made insurance means: Only claims that are reported to the insurance company during the policy term or within 90 days after expiration date are valid. It is recommended that Professional Liability Insurance be maintained until the statute of limitations for your state has expired since your last class completion date.

4. After the first year, the non-teaching Instructor may return to Active status by completing all requirements for an Active Instructor renewal plus attending a SEI/PDIC Instructor update seminar as described under Renewal '1b' above. After 3 years of inactive status the following will apply:
  - a. Instructors who have maintained a continuous teaching status with another scuba training agency must complete the following to re-certify:
    - (1) Receive a lecture on SEI/PDIC teaching philosophy and administrative requirements.
    - (2) Attend a SEI/PDIC Instructor Update.
    - (3) Complete the standards exam.
    - (4) Complete continuing education requirements.
  - b. Instructors who have not maintained teaching status in another agency for up to 6 years:
    - (1) Attend an entire Crossover Institute.
    - (2) Have all prerequisites for SEI/PDIC Instructor.
  - c. After 6 years of non-teaching status, repeat the Instructor institute.The above also applies to Instructors returning to Active status from Emeritus status.
5. Instructors living in foreign countries or serving in the military often do not have access to continuing education. These Instructors will be considered active as long as they teach at least one course of at least six students annually. Upon return to the U.S., if one has not been attended during the overseas or military service, the Instructor must attend an update within 2 years.
6. Instructors who are certified by institute within the 3-month period (October, November, December) preceding the December 31 renewal date need not complete the renewal form or submit a renewal fee for that year. However, insurance requirements still must be met. All other Instructors must complete a renewal form and submit the appropriate fees with proof of insurance.
7. Instructors who have not renewed by March 1 of each year will be dropped from the rolls and can be readmitted only through normal certification channels.

## WHAT TO EXPECT AT AN INSTITUTE

The SEI/PDIC Leadership courses are a progressive series of training sessions designed to increase the knowledge and skills of divers seeking to become SEI/PDIC Divemasters/Dive Supervisors, Assistant Instructors and Instructors. Each of the three courses is presented separately. However, they can be combined into one continuous Leadership Instructor format. Exact format is up to the local SEI/PDIC Instructor Trainer with the approval of the Program Director. Pre-institute information from the Instructor Trainer will outline the details of the program you will be taking.

Scuba Instructors affiliated with other agencies seeking to crossover to SEI/PDIC must attend a Crossover Institute. This crossover is designed to test the knowledge and abilities of the instructor and provide information about SEI/PDIC. This institute may occur at the same time as an Instructor session or as a separate Institute.

The following provides an example of what will occur during a typical institute.

### PRE-INSTITUTE

Most Instructor Trainers will require pre-registration so that required materials may be purchased and prepared. A deposit is usually requested to secure your place on the roster. Some Institute Directors will request photocopies of prerequisite details prior to arrival that first day to reduce sign-in time. Crossover Instructors will have a standards exam to complete prior to attending an institute.

### ON ARRIVAL

You will be greeted by the Instructor Trainer or other staff and asked to complete some forms. You will also be asked for proof of any prerequisites not already on record and for payment of fees.

### THE CLASSROOM

SEI/PDIC Institutes promote a relaxed atmosphere where you are encouraged to ask questions during the presentations. Most Institutes will have several presenters to cover the material. Note the teaching styles you like most and begin to form your own style after the best points you observe.

These are usually long days with short breaks and intensive learning. Arrive well rested. Divemaster/Dive Supervisor, Assistant Instructor, Instructor and Crossover include pool sessions and all except Crossover require open water training.

### CANDIDATE LECTURE PRESENTATIONS

Each candidate will make two or three classroom lecture presentations for practice and evaluation during Assistant Instructor course and again at Instructor and Crossover. These will be presented to other candidates acting as an entry-level class. Two or more staff persons will be in attendance evaluating your lecture. In addition there will be two short poolside lectures in the Assistant Instructor course and three in Instructor and Crossover, given by each candidate.

The stress normally associated with an evaluated presentation of this type can be reduced by being well prepared. Practice is essential. Prepare material and actually present the lectures to entry-level classes where you are assisting teaching prior to the Institute.

### WRITTEN TESTING

These tests cover a wide range of diving topics previously listed in this booklet. As part of the Divemaster/Dive Supervisor course, you will take a 100 question written exam. A passing score of 80% or above is required.

The Assistant Instructor exam is also 100 questions with the same passing requirements.

In the Instructor Institute there are three 50-question tests. Again, 80% is the passing score on each 50-question section of the exam.

Instructor Crossover candidates will have completed a SEI/PDIC Standards and Procedures Exam prior to the institute and another 50-question exam at the institute.

### **POOL or CONFINED WATER TRAINING**

A natural increase in stress occurs at an institute and tends to reduce your performance. To avoid this effect, practice the skills before attending. In leadership programs, the pool skills must be completed as written to be certified. At this level pre-institute practice is essential. These skills become more challenging with each level. The need to practice cannot be overemphasized. Your stress level will be reduced, performance will excel and the Institute becomes fun rather than a difficult challenge.

As part of each pool session beyond Divemaster/Dive Supervisor, there will be time spent on pool-side teaching. In the Assistant Instructor, Instructor and Crossover programs, you will lead a small group of candidates through several pool exercises. This will include a short lecture, demonstration and "student" practice. These are evaluated presentations.

### **OPEN WATER TRAINING**

During the Divemaster/Dive Supervisor course you will complete both diving proficiency skills as well as lead "students" on open water tours. The Divemaster/Dive Supervisor in training will also serve in several other capacities during the 5 required dives. In the Assistant Instructor program, you will perform entry level "line" skills for a staff person, complete a simulated rescue and conduct a short "tour" dive including briefing and debriefing.

At the Instructor Institute you will be providing instruction to a staff person as a "student". You will guide this student through skills and a tour correcting any difficulties they might have. The Crossover Candidate will be present at an Open Water Workshop to complete this portion.

### **PREPARING A COURSE OUTLINE AND TEACHING NOTES**

In the SEI/PDIC Program you are allowed to organize the material for Open Water Diver, advanced and specialty courses, making sure you comply with all required standards. The Open Water Diver Instructor Guide contains a suggested outline, teaching notes and visual aids. You may reorganize and enhance this material as you wish as long as all standards are met.

The Instructor Institute Review Board will want to see the full teaching notes on at least one of the practice presentations you make during the Institute. A look in section II of the Standards and Procedures Manual will show you the material that must be included. The more detail you present, the more help the staff can be to you. Request assistance on any area where you need it.

If you are crossing over from another agency to SEI/PDIC Instructor the teaching outline and notes from your agency will probably not fit the needs of our program. Be sure you cover all details of our program standards. The typical SEI/PDIC Open Water Diver course, as an example, contains 32 hours of classroom and pool training. The course you have been teaching may contain less than this and will need to be enhanced.

Candidates for both Instructor and Crossover will be asked to complete a Course Outline Questionnaire that includes the hours, subjects and timing you intend to teach in the Open Water Diver course and the Advanced Level 3 Diver Course.

## **REVIEW BOARDS**

At the end of each program, candidates will spend individual time with a review board composed of two or more staff persons. During this session details of candidate evaluations will be discussed as well as recommendations for further study and work. This is the time to discuss any concerns you might have in regard to your attendance at the Institute.

You will be told at the review board whether you passed, failed, or have incomplete requirements. Be sure all your questions are asked at this session.

## REFERENCE MATERIAL

1. SEI/PDIC Leadership manuals and materials available from the SEI/PDIC Program Office.
  - a. SEI/PDIC STANDARDS AND PROCEDURES MANUAL.
  - b. SEI/PDIC OPEN WATER DIVER INSTRUCTOR GUIDE.
  - c. SEI/PDIC & PDIC AIR DIVING TABLES.
  - d. DIVING FUNDAMENTALS FOR LEADERSHIP TEXT
2. NOAA DIVING MANUAL, Fourth Edition, 2001 or later  
- Department of Commerce, Best Publishing, ISBN 0-941332-70-5
3. U S NAVY DIVING MANUAL, Revision 6, 2008 or later  
- Dept. of the Navy, Best Publishing (CD); Free from the Navy Supervisor of Salvage web site:  
[http://www.supsalv.org/00c3\\_publications.asp](http://www.supsalv.org/00c3_publications.asp).
4. SCUBA LIFESAVING, 2007  
- Dan Orr & Eric L. Douglas, Human Kinetics, ISBN13: 9780736052511
5. DAN: DAN Dive & Travel Medical Guide  
- Guy de Lisle Dear & Neal W. Pollock, Divers Alert Network
6. SEI/PDIC DIVER RESCUE and ACCIDENT MANAGEMENT Rescue Manual  
- SEI/PDIC Office
7. A MEDICAL GUIDE TO HAZARDOUS MARINE LIFE, 1996  
- Paul Auerbach, MD, Best Publishing Company, ISBN-13: 9780941332552
8. DIVING PHYSIOLOGY IN PLAIN ENGLISH, 1997  
- Jolie Bookspan, Ph.D., Undersea and Hyperbaric Medical Society, Inc. ISBN-13: 978-0930406134

The following are sources for the books listed above:

Best Publishing  
PO Box 30100  
Flagstaff, AZ 86003-0100  
800-468-1055

Divers Alert Network  
6 West Colony Place  
Durham, NC 27705-2563  
800-446-2671

Undersea and Hyperbaric Medical Society, Inc.  
10531 Metropolitan Avenue  
Kensington, MD 20895-2627  
301-942-2980

Scuba Educators International  
World Headquarters  
1623 W. Jackson Street  
Muncie, IN 47303  
765-281-0600



