

DRAFT NEW TRADE
UNDERWATER INSTRUCTOR
(Time-Based)

APPENDIX A

O*NET CODE: 25-3021.00

This training outline is a minimum standard for Work Processes and Related Instruction. Changes in technology and regulations may result in the need for additional on-the-job or classroom training.

This apprenticeship program is designed to provide a guided experience in how an Underwater Instructor teaches individual or group aquatic sports as it relates to the instructor's concentration(s). Instructors will be primed to evaluate the abilities of an individual to determine a suitable training program(s). Each apprentice's developing mastery of the Work Processes, applied in their individual field, will be ongoing and progressive.

WORK PROCESSES

All apprentices must complete the following Core Work Skills Processes:

Core Work Skills 1000 Hours

	Approximate Hours
A. Workplace Equipment and Related Safety	150
1. Prepare industry-specific equipment such as cylinders, exposure suits, fins, regulators, gauges, hoses, masks, mouthpieces, and buoyancy compensators.	
2. Handle compressed gas cylinders in accordance with safety regulations.	
3. Transport, store, sanitize and maintain equipment.	
4. Deploy and take down auxiliary equipment such as dive floats, buoys, reels, spools, and lift bags.	
5. Set-up, maintain, and prepare to use safety equipment, such as first-aid kits, emergency oxygen, AED, dive supervision aids, and floatation devices.	
6. Set-up and maintain the Save-a-Dive kit and troubleshoot equipment and handle minor repairs.	
7. Create and utilize checklists to aid in preparation and safety.	
8. Manage worksites and activities according to policies and procedures.	

9. Adhere to training standards, lesson plans, and regulations.

B. Content Creation and Lesson Planning

175

1. Demonstrate ability to clearly, accurately, and effectively explain diving concepts – including equipment, physics, physiology, medical problems, decompression, theory, use dive tables and computers for planning, communication, rescue skills, diving practices, boat diving procedures, and environmental issues.
2. Ensure educational content meets quality standards and training objectives.
3. Plan and design educational content and curriculum utilizing various content creation tools that accommodate different learning styles and environments.
4. Set up digital or physical learning aids and other resources.
5. Plan interactive activities that reinforce learning material.
6. Substantiate claims and cite sources.
7. Source, create, and edit media (such as videos, images, and recordings) to be used in educational content.

C. Theoretical Instruction

150

1. Deliver effective real-time instruction in an in-person classroom setting and digital setting.
2. Demonstrate the ability to engage and maintain control of students.
3. Evaluate learner understanding using a closed-feedback loop.
4. Demonstrate ability to simplify and explain complex subjects.
5. Prepare, administer, grade, and remediate theoretical examinations.
6. Suggest relevant opportunities for additional learning.

D. Dive Instruction and Activity Supervision: Confined Water

175

1. Plan and execute diving activities in confined water environments.
2. Load, unload, and distribute equipment to participants.
3. Assist participants with donning and doffing equipment.
4. Conduct briefs and debriefs.
5. Demonstrate dive skills with instructor-level clarity and proficiency.
6. Demonstrate proficiency in rescue techniques.
7. Demonstrate professionalism in various roles including Instructor, Assistant, and Coach.
8. Maintain training records of students.
9. Demonstrate inclusivity and competency to adapt to students' diverse needs.
10. Conduct introductory diving experiences, refresher diving classes, certification training classes, and private training.

E. Dive Instruction and Activity Supervision: Open Water

150

1. Plan and execute diving activities in open water environments.
2. Research, select, and assess open water dive sites.
3. Check divers in and out of the water, assign buddies, and manage roll call.
4. Supervise divers, directly and indirectly.
5. Create, review, and adhere to Emergency Action Plans. Utilize emergency equipment such as a first-aid kit, oxygen kit, and save-a-dive kit.
6. Communicate effectively during all dive phases. Conduct briefs and debriefs with students and staff.
7. Log diving activities.
8. Guide dives, utilizing both compass and natural navigation.
9. Demonstrate stewardship of the aquatic environment.
10. Set up, manage, and take down dive site, including deployment of diving flags and management of equipment and divers.

F. Administrative Work

100

1. Review and submit dive plans, logs, training record, and other relevant information to the database.

2. Correspond with customers, coworkers, vendors, and other parties.
3. Engage the community on various platforms.
4. Onboard participants to dive activities by checking waivers and medical questionnaires.
5. Maintain the dive shop (e.g., cleaning, organizing, etc.)
6. Conduct office duties, such as website updates, staff and learner scheduling, pool rentals, etc.
7. Perform sales-related tasks/activities.

G. Evaluation and Certification

100

1. Conduct assessments to ensure student competency.
2. Manage and prevent hazards during skill evaluations.
3. Perform skill assessments.
4. Document evaluations and maintain records.
5. Process certifications.

Concentrations 1,000 Hours

Each apprentice must complete 1, 2, 3, 4, or 5 of the following concentrations. Selection of which concentration(s) will be completed is at the sponsor’s option depending upon their particular needs.

Number of Concentration(s) Selected	Hours per Concentration
1	1,000
2	500
3	334
4	250
5	200

The following processes/tasks are performed in association with each of the concentrations listed below and include various duties and competencies related to the field but is not meant to be all-inclusive. The specific tasks are to be tailored to the sponsor's requirements.

H. Freediving

1. Set up and maintain freediving rigs, ensuring proper function and safety.
2. Select, fit, and explain the use of freediving equipment, including masks, fins, wetsuits, and computers.
3. Oversee freediving sessions.

4. Teach and supervise exercises for static apnea to improve students' breath-holding capabilities.
5. Instruct dynamic apnea techniques, including hydrodynamics and turn maneuvers.
6. Guide divers through free immersion dives.
7. Coach divers in constant weight freediving.
8. Train students in various equalization techniques.
9. Teach freediving buoyancy control, including weighting and posture adjustments for different depths and diving conditions.
10. Instruct no-fin apnea techniques, focusing on effective propulsion with arm strokes and body movement.
11. Prepare and conduct oxygen and carbon dioxide table training sessions to improve breath-hold ability.
12. Assess student performance and provide feedback.
13. Teach breath-hold safety and rescue procedures.
14. Conduct freediving certification evaluations.
15. Create educational content about freediving.

I. Mermaiding

1. Develop a "Mersona" and stay in character during performance-based teaching activities.
2. Conduct "Mersona Workshops", instructing on character development and audience engagement.
3. Teach underwater modeling techniques for photography and video.
4. Explain topics in mermaiding, including breath-hold physiology, pressure adaptation, thermoregulation, and mermaiding culture.
5. Teach about selecting and caring for mermaiding equipment and water-safe costumes and accessories.
6. Instruct on achieving neutral buoyancy and proper positioning.
7. Teach about mermaiding content-creation techniques and performance activities.
8. Adapt mermaiding techniques for individuals with special needs.
9. Conduct mermaiding certification evaluations.
10. Create educational content about mermaiding.

J. New York Scuba Instructor

1. Instruct and certify divers in the use of drysuits.
2. Explain and demonstrate procedures and safety considerations for wreck diving.
3. Teach local diving procedures that are specific to New York, covering site-specific considerations such as currents, tides, boat diving procedures, and regulations.
4. Demonstrate use of reels, spools, and lift bags for navigation and safety purposes during dives.
5. Provide education on underwater archaeology and historic preservation.
6. Share the history of New York waterways and wrecks, discussing significant sites and the evolution of local maritime activities.
7. Explain the marine biology relevant to New York waters, focusing on identification and behavior of local marine life.
8. Guide certified divers on tours of New York dive sites.
9. Create educational content about New York scuba diving.

K. Water Safety Instructor

1. Educate on Water Safety and Drowning Prevention.
2. Explain and demonstrate aquatic safety principles such as hydrodynamics, buoyancy, swim strokes, and rescue techniques of self and others.
3. Offer swim coaching including technique refinement and performance analysis.
4. Perform lifeguarding duties as needed.
5. Adapt swim lessons to meet the needs of the individual.
6. Train swimmers in rescue basics.

L. Equipment Specialist

1. Service and maintain equipment according to manufacturer's guidelines.
2. Operate cylinder fill station.
3. Perform visual inspections of scuba cylinders and maintain service records.
4. Organize and maintain inventory of equipment and tools.
5. Inspect and repair wetsuits and drysuits.
6. Educate students on maintenance of their equipment.

7. Perform inspections on equipment.
8. Maintain service, inspection, warranty, and rental records.
9. Assist customers with selecting and purchasing equipment.
10. Create educational content about equipment.

Approximate Total Hours

2000

Apprenticeship work processes are applicable only to training curricula for apprentices in approved programs. Apprenticeship work processes have no impact on classification determinations under Article 8 or 9 of the Labor Law. For guidance regarding classification for purposes of Article 8 or 9 of the Labor Law, please refer to <https://dol.ny.gov/public-work-and-prevailing-wage>.

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APPENDIX B
RELATED INSTRUCTION

Safety & Health

1. General Workplace Safety
2. Cylinder Handling and Fill Station Safety
3. Risk Management and Diver Safety
4. Local Laws and Regulations
5. Liability and Duty of Care
6. First Aid/CPR – minimum 6/5 hours every 2 years
7. Emergency Oxygen Administration
8. Emergency Action Planning
9. Search and Recovery
10. Breathhold Safety and Rescue
11. Post-Incident Procedures (Human Factors)
12. Code of Conduct
13. Sexual Harassment Prevention Training – must comply with section 201-g of the Labor Law

Trade Theory and Science

1. Principles and Terminology
2. Diving/Scuba Equipment
3. Aquatic Environment
4. Documentation and Reporting
5. Underwater Communication
6. Navigation
7. Diving Skills
8. Problem-Solving
9. Professional Conduct
10. Communication Skills
11. Time Management
12. Teamwork

Instruction and Leadership

1. Principles and Methodology
2. Curriculum Development
3. Presentations
4. Supervision and Control
5. Adaptive Teaching Methods
6. Content Creation

Each apprentice must have at least 100 verifiable logged dives in a broad variety of the following conditions:

Logged Practice

1. Cleanup Dives
2. Snorkeling
3. Guided Dives
4. Underwater Navigation, Exploration, and Mapping
5. Search & Recovery Dives
6. Low-visibility dives
7. Night Dives
8. Boat Dives
9. Shore Dives
10. Deep Dives

Other Topics as Necessary

A minimum of 300 hours of Related Instruction is required for each Apprentice for each year in addition to at least 100 verifiable logged dives.

Appendix B topics are approved by New York State Education Department.