## **Appendix A2**

## **WORK PROCESS SCHEDULE**

AND

## **RELATED INSTRUCTION OUTLINE**

## **DEVELOPED BY**

Pool & Hot Tub Alliance (PHTA)

FOR THE OCCUPATION OF

Pool Installer Technician (Existing Title: Construction Craft Laborer) O\*NET-SOC CODE: 47-2061.00 RAPIDS CODE: 0661HY



## Appendix A2

#### Pool Installer Technician (Existing Title: Construction Craft Laborer) O\*NET-SOC CODE: 47-2061.00 RAPIDS CODE: 0661HY

This schedule is attached to and a part of these Standards for the above identified occupation.

#### **1. APPRENTICESHIP APPROACH**

□ Time-based

□ Competency-based

⊠ Hybrid

#### 2. TERM OF APPRENTICESHIP

The term of the apprenticeship is reasonably expected to be completed within 3,500 to 4,500 hours with an OJL attainment of all competencies of the position, supplemented by the minimum required 228 hours of related instruction.

#### 3. RATIO OF APPRENTICES TO JOURNEYWORKERS

The apprentice to journeyworker ratio is: 1 Apprentice to 1 Journeyworker.

#### 4. APPRENTICE WAGE SCHEDULE

Apprentices shall be paid a progressively increasing schedule of wages based on either a percentage or a dollar amount of the current hourly journeyworker wage rate, which is: \$22.00 per hour.

Wage Schedule:	0 – 1000 hours =	\$17.00 per hour
	1001 – 2000 hours =	\$18.00 per hour
	2001 – 3000 hours =	\$19.00 per hour
	3001 – 4500 hours =	\$20.00 per hour

Periodic review and evaluation of the apprentice's on-the-job learning and related technical instruction will be conducted in alignment with the wage schedule established. Once an employer determines that an apprentice has reached full competency, the apprentice can become a journeyworker and compensated at least at the minimum journeyworker wage. The minimum annual wage rates may be adjusted based on regional wage scales.

#### 5. **PROBATIONARY PERIOD**

Every applicant selected for apprenticeship will serve a probationary period of 750 hours.

#### 6. SELECTION PROCEDURES

Please see page A2-13.



#### WORK PROCESS SCHEDULE Pool Installer Technician (Existing Title: Construction Craft Laborer) O\*NET-SOC CODE: 47-2061.00 RAPIDS CODE: 0661HY

**Description:** Pool Installer Technician supports all aspects of pool construction. They perform support roles in the activities involving the construction of swimming pools, spas, water features, decks, and related components such as, piping, filtration, hydraulics, safety, electrical systems, pool equipment, and various pool structures.

The term of the apprenticeship shall be defined by the attainment of competencies, both technical and behavioral, of the apprenticeship as listed in the tables within 3,500 to 4,500 hours of OJL.

Competency in the work processes outlined herein can be demonstrated through a variety of venues including observation, proficiency demonstration/aptitude exam, questions and answers, learner's products, simulations, project work, and/or mentor testimony or evidence all as demonstrated on the job.

The employer will assess each apprentice's prior experience to determine what credit for advanced standing will be awarded for work processes schedule (WPS) and Related Instruction (RI). Prior experience will be assessed through resumes, interviews, job assignments, and/or demonstration of competencies. Assigned mentors will assess apprentices for credit for prior experience at any time during the probationary period.

The following competencies will be rated, when applicable, on a scale of 1 through 5:

- 1 Novice; Requires constant supervision
- 2 Beginner; Needs improvement in quality of work
- **3** Intermediate; Meets basic requirements
- 4 Proficient; Goes beyond expectations
- **5** Senior; Always gets results far beyond what is required

Apprentices will advance in the program by demonstrating proficiency (4 – Proficient) in each of the competencies for the occupation. The supervisor will evaluate each apprentice at least once every six months. Apprentices need to receive at least a "4 – Proficient" ranking in each category, that is applicable, in each of their six-month reviews during the apprenticeship to be considered for any wage increases and to have successfully completed the apprenticeship.



#### Apprenticeship Competencies – Technical

The following are the Pool Installer Technician related work processes for the apprenticeship.

	Core Work Processes	Hours (3,500-4,500)
A	Develop and practice worksite safety and maintain safe work environments	500-600
В	Determine proper transit use on a worksite and/or proper water level use as necessary	100-150
С	Ability to read plans in relation to pool and spa construction.	100-150
D	Ability to perform in calculating elevations and slopes.	500-650
E	Ability to read a tape measure and select the correct hand tools necessary to perform tasks related to pool construction	300-400
F	Able to apply correct order of operations of pool construction.	250-300
G	Ability to properly maintain erosion control, including drainage for downspouts.	250-300
Н	Ability to set up a temporary site protection.	50-75
Ι	Able to apply basic pool hydraulics principles during pool installations	500-600
J	Able to effectively apply equipotential bonding principles during pool construction to reduce the risk of equipment damage and personal injury	200-300
К	Ability to demonstrate proper safety protocols with safety setbacks from overhead electrical lines, heater vents, or other hazardous locations.	100-150
L	Contact the utility when needed to mark the area before digging.	50-75
М	Ability to determine if site documentation has been completed prior to the start of construction through resources such as easements.	100-150
N	Complies with the ISPSC (International Swimming Pool & Spa Code)	500-600

The above on-the-job-training (OJT) work process schedule is intended as a guide. The WPS need not be followed in any sequence, and it is understood that some adjustments may be necessary in the percentage of time spent in each of the work processes to allow for different work experiences. In all cases, the apprentice is to receive sufficient work experience to make them fully competent and use good workmanship in all work processes, which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA (Occupational Safety & Health Administration) requirements.



#### **Apprenticeship Competencies – Behavioral**

In addition to mastering all the essential technical competencies, an apprentice must consistently demonstrate at an acceptable level the following behavioral competencies to complete the apprenticeship.

Item #	Behavioral Competencies
1	Participation in team discussions/meetings
2	Focus on team discussions/meetings
3	Focus during independent work
4	Openness to new ideas and change
5	Ability to deal with ambiguity by exploring, asking questions, etc.
6	Knows when to ask for help
7	Able to demonstrate effective group presentation skills
8	Able to demonstrate effective one-on-one communication skills
9	Maintains an acceptable attendance record
10	Report to work on time
11	Completes assigned tasks on time
12	Uses appropriate language
13	Demonstrates respect for customers, co-workers, sub-contractors, and supervisors
14	Demonstrates trust, honesty, and integrity
15	Requests and performs work assignments without prompting
16	Appropriately cares for personal dress, grooming and hygiene
17	Maintains a positive attitude
18	Cooperates with and assists co-workers
19	Follow instructions/directions
20	Able to work under supervision
21	Able to accept constructive feedback and criticism
22	Able to follow safety rules
23	Able to take care of equipment and workplace
24	Able to keep the work area neat and clean
25	Able to meet supervisor's work standards
26	Able to not let personal life interfere with work
27	Adheres to work policies/rules/regulations



#### RELATED INSTRUCTION OUTLINE Pool Installer Technician (Existing Title: Construction Craft Laborer) O\*NET-SOC CODE: 47-2061.00 RAPIDS CODE: 0661HY

The related instruction has been developed in cooperation with the employer as part of the Pool Installer Technician apprenticeship. This instruction shall include minimum recommended 228 hours of related instruction (RI) throughout the apprenticeship. The curriculum is defined as a variety of courses, including self-directed web-based courses with oversight by a trainer, around which the exams and projects are based. By defining the RI this way, all competencies required of the apprentices are met, through project work.

The employer will assess each apprentice's prior learning to determine what credit will be awarded for the RI, as well as for meeting the prerequisite and completion requirements of the apprenticeship. Prior learning will be assessed through transcripts, certifications, course credits, and/or demonstrated skills. Assigned mentors will assess apprentices for credit for prior learning at any time during the probationary period.

#### **COURSE TOPICS**

CORE COURSE TOPICS	HOURS
Pool Construction – Concrete/Vinyl Liner & Fiberglass	48
Confined Spaces	2
Creating & Maintaining a Compliant Work Environment	2
Discrimination-Fee Workplace	2
DOT Fundamentals of Hazardous Materials	2
Emergency Response Planning	4
First Aid and Safety	8
Fundamentals of Hazardous Materials	2
Hazardous Waste Management	2
Heat Stress of Combustible Liquids	2
Indoor Pool Air Quality	2
International Swimming Pool & Spa Code Training	12
Introduction to Fluid Hydraulics	8
Introduction to Fiberglass Pool Sales and Construction	4
OSHA Training 30 hour	30
Peer Leaders: Why You Need Them	4
Personal Protective Equipment	6
Pool Construction 101	24
Recreational Water Illnesses	8
Sexual Harassment for Employees	10
Start with a Plan: Introduction	6
Class Pass: PHTA webinar Series	18
Pool Operator Primer	10
Aquatic Play Features	12
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The following are the technical course topics for the apprenticeship.



The above-related instruction (RI) outline is intended as a guide. The course topics need not be followed in any sequence, and it is understood that some adjustments in course topics/subtopics may be necessary to allow for different learning experiences. In all cases, the apprentice is to receive sufficient RI to allow them to obtain the knowledge necessary to perform the relevant competencies using good workmanship in all work processes which are a part of the industry. In addition, the apprentice shall be fully instructed in safety and OSHA requirements.

#### **CORE COURSE TOPIC DESCRIPTIONS**

#### POOL CONSTRUCTION – CONCRETE/VINYL LINER & FIBERGLASS 48 Hours

This 3-day intensive school encompasses all the necessary disciplines for building a structurally sound water vessel. Topics covered within the school include site analysis, introductory fluid engineering, geotechnical and structural engineering that includes a review of difficult sites, shotcrete, waterproofing, tile, interior finishes, coping, and concrete decking. The course concludes with an interactive walkthrough of a complex project from start to finish. This program is designed to move each student through all phases of concrete pool construction in detail, unlike anything else offered in the industry.

#### Learning Objectives:

- Identify code requirements.
- Understand inspection, operation, and maintenance procedures.
- Recognize components of a circulation system.
- Review safety and health protocols: including chemical and electrical safety, drowning and accident prevention, and environmental conditions.
- Calculate proper pool mathematics.
- Examine electrical components, heaters, filtration, chemical feeders, and control systems.
- Analyze proper maintenance planning.

#### **CONFINED SPACES**

This course educates all general industry employees about the existence of confined spaces, the type of hazardous conditions that can be present, and the basic requirements for entry into permit required confined spaces.

#### Learning Objectives:

- Identify characteristics and examples of a confined space.
- Identify hazards of confined spaces.
- Identify the differences between permit-required and non-permit-required confined spaces.
- Recognize the basic requirements of a permit-required confined space entry program.

#### **CREATING & MAINTAINING A COMPLIANT WORK ENVIRONMENT**

Attorney Steve Getzoff will review, examine, and provide expert legal advice on how to prevent and address harassment and discrimination. The course will analyze complying with wage and hour issues and discuss how to protect your customer base and trade secrets.

#### DISCRIMINATION-FREE WORKPLACE

This lesson provides employers and managers an awareness of issues relating to discrimination in the workplace and practical considerations for avoiding discriminatory practices, including discrimination associated with race, color, religion, sex, national origin, age and physical or mental disability.

#### 2 Hours

#### 2 Hours

#### Learning Objectives:

- State what constitutes employment discrimination.
- Identify the federal discrimination laws in place to protect individual workers' rights.
- Recognize the importance of promoting a discrimination-free workplace.
- Identify recommended guidelines for employers and managers.
- Discuss the actions taken if a discrimination charge is made.

#### DOT FUNDAMENTALS OF HAZARDOUS MATERIALS

Hazardous materials are defined as materials that could adversely affect the safety of the public, handlers, or carrier workers during transportation. The DOT Fundamentals of Hazardous Materials online course offers awareness-level knowledge for aquatic professionals that can help them save lives in high-risk work environments, particularly those that involve transporting hazardous materials.

#### **EMERGENCY RESPONSE TRAINING**

In this training course, you will learn what is required in a company emergency response plan and your responsibilities regarding the plan. You will also learn the training requirements for emergency response plans. In addition, you will learn the requirements for alarm systems, fire prevention plans, fire prevention measures, ways to access the emergency exit routes, and aquatic emergency response plans. Finally, you will learn employee responsibilities for responding to weather-related disasters, natural disasters, bomb threats, fire, workplace violence, and hazardous material spills.

#### FIRST AID AND SAFETY

This course is designed to teach the participant to be prepared for unexpected situations on the job site and workplace with first aid and safety training.

#### **Learning Objectives:**

- Basic First Aid Training
- Performing First Aid
- Key Safety measures for pool and hot tub professionals

#### FUNDAMENTALS OF HAZARDOUS MATERIALS

This course provides general awareness training of the basic requirements of the Department of Transportation (DOT), including the definition of hazardous materials. Employees who are responsible for the transport of hazardous materials will become familiar with regulations related to packaging, marking, labeling and shipping papers. This course can be used for either new employees or as recurrent training.

#### **Learning Objectives:**

- Explain the function and importance of packaging, package labels, package marking, shipping papers, and vehicle placards.
- Identify the nine hazmat classes and their divisions.
- Explain the DOT rules for using the proper shipping names and the Hazmat Table.

#### HAZARDOUS WASTE MANAGEMENT

This course examines hazardous waste, recognizes the standards that regulate hazardous waste, and identifies hazardous waste management requirements.

#### 8 Hours

2 Hours

### 2 Hours

#### 2 Hours



#### **Learning Objectives:**

- Identify the purpose of a waste management program.
- Define the categories of waste, including hazardous, universal, "potentially' hazardous, and nonhazardous.
- Identify the purpose for regulating hazardous waste, which regulatory standards apply to hazardous waste management and the three classifications of waste generators under Resource Conservation and Recovery Act (RCRA).
- Identify transportation and disposal requirements for hazardous waste.
- Identify the requirements for emergency preparedness and contingency planning.
- Recognize the requirements for training personnel, reporting, and recordkeeping.

#### HEAT STRESS OF COMBUSTIBLE LIQUIDS

# The goal of this course is to provide awareness training to help workers correctly apply the principles of hazard recognition, safety, flashpoint protection, and inventory inspections in the use of flammable and combustible liquids in the workplace.

#### Learning Objectives:

- Identify the definitions and terms associated with flammable and combustible liquids used in the workplace.
- Recognize hazards inherent with work involving flammable and combustible liquids.
- Identify the safety requirements for the use of flammable and combustible liquids on the job.
- Recognize the storage requirements for flammable and combustible liquids at a work facility.
- Identify the principles of flashpoint protection when working with flammable and combustible liquids.
- Identify the steps for inspecting inventories of flammable and combustible liquids in the workplace.

#### **INDOOR POOL AIR QUALITY**

This course aims to provide awareness training to help employees recognize the occupational hazards and health effects of indoor air contaminants and controls to help maintain good indoor air quality.

#### Learning Objectives:

- Define the term 'indoor air quality'
- Recognize the consequences of indoor air contamination.
- Recognize the causes and sources of the major indoor air contaminants.
- Identify the health effects and major risks of indoor air contamination.
- Identify controls to help maintain good indoor air quality.
- Includes ASHRAE standards for indoor air quality for indoor swimming pools.

#### **INTERNATIONAL SWIMMING POOL & SPA CODE TRAINING**

This course is designed to help builders and inspectors understand the many changes to pool construction, including calculations of total dynamic head (TDH), Suction-Outlet Fitting Assemblies (SOFAs), barriers, and additional construction requirements. The course addresses the code regarding quality, safety, energy, and conservation per the ANSI/PHTA approved standards.

#### Learning Objectives:

• Review code definitions.

## 2 Hours

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#### **12 Hours**

Examine International Code Council (ICC)/Pool & Hot Tub Alliance (PHTA)/ American National Standards Institute (ANSI) Standards within the code.

- Examine entrapment; TDH; sanitation; disposal; storage.
- Review heaters, pumps, and filtration.
- Identify hydraulic design and data requirements for permit approval.
- Calculate TDH.

#### INTRODUCTION TO FLUID HYDRAULICS

Hydraulic engineering cannot be explained in 4 hours, and neither can proper plumbing methods. However, this program provides a good start by providing an overview of the design and engineering process as well as a good list of best practices for everything from layout to assembly to pressure testing

#### INTRODUCTION TO FIBERGLASS POOL SALES AND CONSTRUCTION

This introductory course will provide you an overview of what's involved with a fiberglass pool, from sales to delivery and a checklist in between. For those interested in expanding their market and offerings, you won't want to miss this.

#### Learning Objectives:

- Discuss first steps of fiberglass installation.
- Define the market of fiberglass vessels.
- Examine current trends of fiberglass purchases.

#### **OSHA TRAINING 30 HOUR**

OSHA 30-Hour training for construction and general industry prepares supervisors and workers to avoid workplace safety and health risks. Our OSHA-authorized courses are 100% online and accessible 24/7 from any web-enabled device. Topics covered in OSHA 30-Hour training include general worksite safety, avoiding common hazards, understanding workers' rights, employer responsibilities and more. Finish your training at your own pace and earn an official OSHA 30 card from the U.S. Department of Labor (DOL) — a common requirement for employment in construction and other industries.

#### PEER LEADERS: WHY YOU NEED THEM

A vibrant aquatics program is one where team members are inspired and empowered to deliver high-quality programs and services. This takes a commitment to identifying, coaching, and mentoring key team leaders who then can influence their peers and encourage a culture both of safety and success. Join us as we explore proven strategies to engage your team and elevate your program to the next level.

#### Learning Objectives:

- Identify effective methods of building and engaging teams.
- List three ways to improve training through the use of peer mentors.
- Learn how cultivating effective team leaders improves guest service, emergency response, and daily operations.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

The goal of this course is to enable individuals to protect themselves from illness or injury by the appropriate use of personal protective equipment. The course includes lessons on Eye & Face Protection, Hand Protection, Head Protection, Hearing Protection, Foot Protection, and Respiratory Protection.

#### 8 Hours

**4 Hours** 

#### 4 Hours

**6 Hours** 



#### Learning Objectives:

- Define the purpose of personal protective equipment.
- Identify proper personal protective equipment required to perform jobs.
- Examine the training required before using PPE, including the limitations of the PPE.
- Identify the requirements for inspecting, maintaining, and disposing of personal protective equipment.

#### **POOL CONSTRUCTION: 101**

This course is designed to teach new labors all about the fundamentals of the pool construction. Topics covered within the school include basic knowledge on site analysis, introductory pool terminology, introductory to engineering that includes a review of difficult sites, shotcrete, waterproofing, tile, interior finishes, coping, and concrete decking. The course concludes with an interactive walkthrough of a project and the many functions that a new pool professional will learn on the job. This program is designed to move each student through the first steps to becoming a pool builder.

#### Learning Objectives:

- Pool Terminology
- Fundamental understanding of basic pool hydraulics
- Pool Equipment and their functions
- Order of pool construction and operations

#### **RECREATIONAL WATER ILLNESSES**

The Recreational Water Illnesses (RWI) online training course provides a comprehensive and detailed understanding about the control of RWIs. Created for operators, managers, service companies, suppliers, and health officials, the course takes the participant through the basic steps of identifying the health threats present, unique features to those threats, understanding what the possible consequences would be, identifying ways to reduce the risks and, finally, prioritizing the risk reduction. The dynamic learning experience includes narration, images video, and interactive activities, and a copy of the Recreational Water Illnesses handbook.

#### Learning Objectives:

- Examine risk management for RWIs.
- Discuss microbes and disease.
- Identify gastrointestinal, dermal, and respiratory RWIs.
- Discuss methods for controlling of RWIs.

#### SEXUAL HARASSMENT FOR EMPLOYEES

The goal of this course is to train employees to recognize, to report, and to prevent incidents of sexual harassment in the workplace.

#### **Learning Objectives:**

- Define sexual harassment.
- Identify behaviors that might be considered sexual harassment.
- Identify the proper actions employees should take if they experience or witness sexual harassment.
- Discuss personal liability and the liability of others when sexual harassment takes place.

#### 8 Hours

#### 24 Hours



#### START WITH A PLAN: INTRODUCTION

Every pool starts with a plan. This course teaches new pool professionals the basics of pool plans, including proper measurements, CAD drawing,

#### Learning Objectives:

- Basic knowledge to read a plan
- Start of how to lay out a plan
- How to communicate a plan with a customer
- How to execute a plan
- What are CAD drawings

#### PHTA CLASS PASS: WEBINAR SERIES

PHTA Class PASS delivers free webinars for members covering various topics from construction, service, retail, business operations to the latest trends and issues in the pool and hot tub industry. All live webinars are recorded are stored online for viewing at anytime.

#### **Learning Objectives:**

- Stay up to date on the latest news/issues in the aquatics industry
- Access to dozens of webinars focused on various segments of the pool and hot tub industry.

#### **POOL OPERATOR PRIMER**

This dynamic program for pool professionals, operators, service technicians, facility managers, and environmental health officials is a great stand-alone eight-lesson online training course, or it can be the first step towards earning a Certified Pool Operator (CPO) certification. Understanding fundamentals of Pool and spa operation and safety reduces the risk, decreases liability, and creates value for customer. Successful completion of all eight lessons earns a record of completion.

#### Learning Objectives:

- Identify code requirements.
- Understand inspection, operation, and maintenance procedures.
- Recognize components of a circulation system.

#### **AQUATIC PLAY FEATURES**

Designed for those who operate, manage, install or service an aquatic play feature, large or small, the goal of this course is to provide understanding on how to manage facilites with water features. The course focuses on the proper operation of these unique features, as well as risk reduction to the users, employees, and the facility itself. An illustrated full color handbook is included with the online course.

#### Learning Objectives:

- Define the different types of aquatic play features
- Discuss how to maintain good water quality
- Review unique staff and public management guidance

#### 18 Hours

**10 Hours** 

#### **12 Hours**





#### **SELECTION PROCEDURES**

When an apprenticeship opening occurs, one or more of the following procedures will be followed:

#### A. Alternative selection method

The sponsor may select apprentices by any other method, including its present selection method, provided that the sponsor meets the requirements listed in 29 CFR §§ 30.10(b). This may include one or more of the following steps:

- A. Sponsor will schedule an interview and evaluation session. All applicants who have met the minimum qualifications and have submitted the required documents will be notified of the date, time, place and/or method for the conduct of the interview. The recruiter/interviewer will record the questions asked and the general nature of the applicant's answers during this interview process. The sponsor's selecting official will evaluate each applicant interviewed on like factors taking into account the information on the application and required documents, as applicable using an Interview Guide.
- B. Upon completing all interviews and analyzing the applicants' qualifications the sponsor's selecting official will make a determination using the annotated Interview Guides. Applicant(s) with the highest evaluation will be selected first. The selected applicant(s), depending on the number of vacancies offered by the advertised announcement, will be offered employment in order of evaluation and upon acceptance of employment will be placed in the apprenticeship program.
- C. Selected applicants must respond to the offer of employment within 48 hours of notice of selection. If applicant(s) do not respond within the period specified, the sponsor will move past their name to the next applicant in the pool. Applicants passed over will be contacted by the sponsor by email and/or phone to determine if the applicants are still interested. If no response is received in fifteen (15) working days from this notice, the applicant's name will be removed from the pool.
- D. After all, offers of employment have been extended and accepted by the selectee(s), as applicable, the remaining applicants in the pool of eligible will be notified of their non-selection under this vacancy announcement. The non-selection notice will also include instructions on how they can apply for any future openings.
- E. Qualified applicants remaining in the pool of eligible will be kept on file for a period of two (2) years, unless the applicant is removed from the pool by their own written request or following failure to respond to an offer of employment.



F. During the two (2) year period, to update their status in the pool of eligible, applicants who feel that their qualifications have improved since their original placement in the pool may submit evidence of such additional experience and/or training by updating their candidate profile and request reevaluation or by simply submitting a new application for subsequent vacancy announcements.

#### B. Selection from pool of current employees

The sponsor may select apprentices from an eligibility pool of the workers already employed by the program sponsor or by the sponsor's established promotion policy. The sponsor adopting this method of selecting apprentices shall establish goals for the selection of minority and female apprentices, unless the sponsor concludes, in accordance with the provisions of 29 CFR §§ 30.10(b) that it does not have deficiencies in terms of underutilization of minorities and/or women (minority and nonminority) in the apprenticeship of journeyworker occupations represented by the program.

The decision of the Company with respect to the selection of apprentices is final.