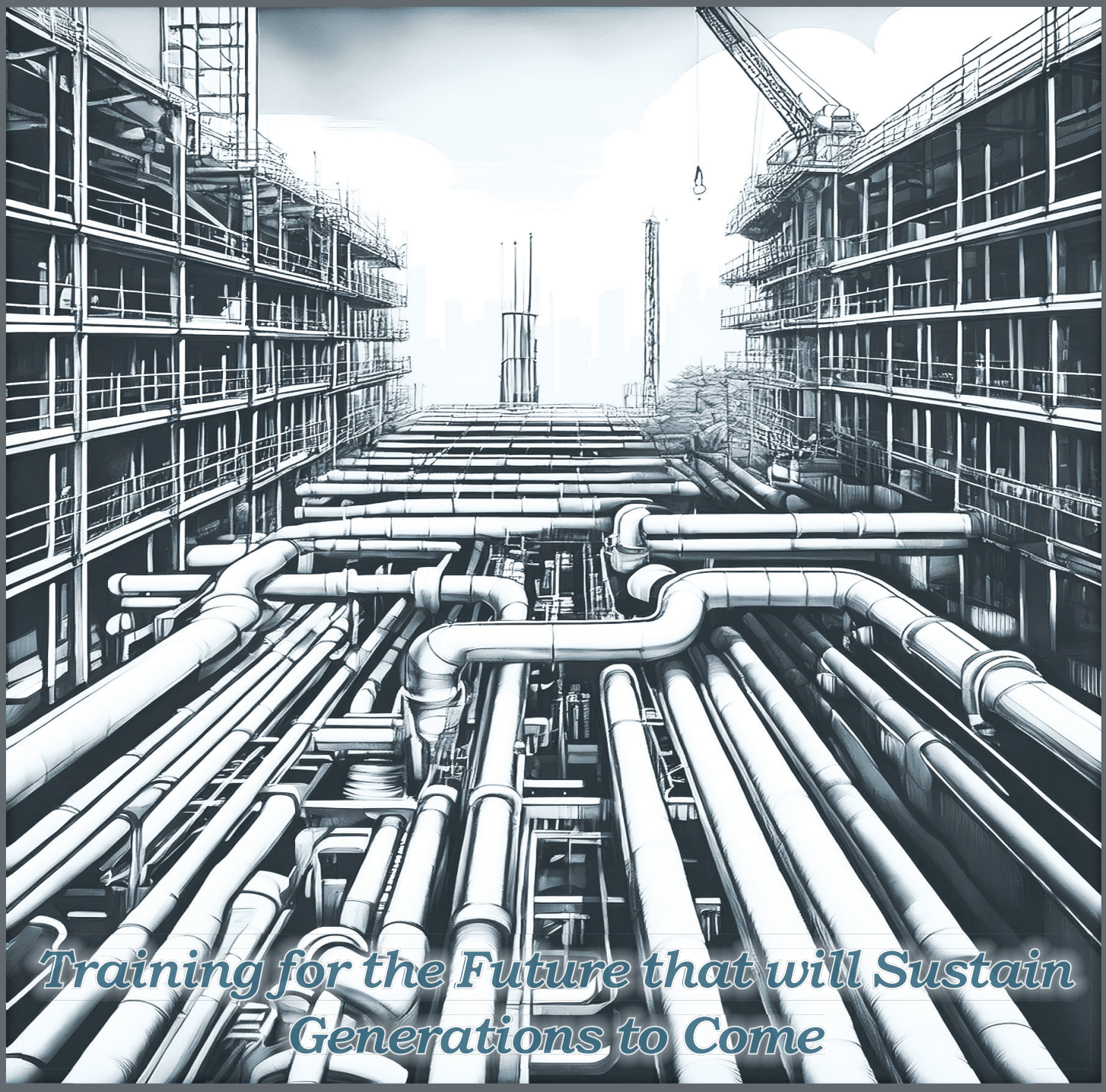
2025 INSTRUCTOR TRAINING PROGRAM



August 9TH - 15TH ANN ARBOR, MICHIGAN

United Association Building
Three Park Place
Annapolis, MD 21401
(410) 269-2000
http://www.ua.org

Dear Brothers and Sisters,

I am filled with pride and anticipation as we celebrate the 71st year of our revered Instructor Training Program, a tradition diligently upheld at Washtenaw Community College (WCC) for more than 35 years. This program, which serves as a beacon of our commitment to maintaining industry expertise and adapting to evolving needs, is a testament to your invaluable role as United Association instructors. The UA Education and Training Department is proud to present the 2025 Instructor Training Program, a reflection of our enduring legacy, which is only possible because of your dedication and knowledge.

The UA has the most admired training program in the industry, and much of that stems from the efforts you invest during ITP week. Our comprehensive training program ensures safety, enhances our members' employability, anticipates industry shifts, and prepares us for the future. We take pride in providing the best training, including access to the industry's leading trends and innovative technology.

Our contractors and owners recognize the importance of safety, productivity, and skills training. The essential components of their work highlight the training excellence we provide, serving as a testament to the unwavering dedication and unmatched expertise of UA instructors. You are the backbone of our industry, upholding the highest standards of quality craftsmanship. Your contributions ensure our contractors' ability to secure work for our members and pave the way for thousands of new members through our continuing journeyperson training. Your role is vital, and we appreciate your commitment to the industry.

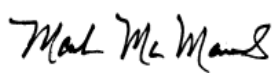
This year, we are offering several new classes. Many of the new additions to the course electives align with revised industry standards. Please take the time to review the list of new courses available in 2025.

The International Apprentice Contest is both exciting and important during ITP week. Finalists have invested countless hours of hard work and dedication, excelling in their local, state/provincial, and district competitions. They are the best of the best. I encourage you to spend time in the car barn to witness our contestants tackle the hands-on portion of the competition.

The UA is proud to continue its commitment to supporting veterans and injured service members of all branches of the U.S. Armed Forces through our charity event, the Sixth Annual ITP BIM Cup Corn Hole Tournament. The winners will be announced during the UA Block Party in Ann Arbor on Monday, August 11th. The proceeds from this tournament will be donated to the Semper Fi and America's Fund and will provide immediate financial assistance and lifetime support for post-9/11 wounded veterans and their families. Your involvement in this event, beyond being a fun-filled activity, will significantly contribute to the lives of these brave individuals.

We are eagerly anticipating the upcoming Instructor Training Program and are excited to welcome you all to Ann Arbor. Your participation and dedication make this program a success, and we look forward to another year of learning, growth, and camaraderie.

Fraternally yours,



Mark McManus
General President

Our Mission Statement

The mission of the UA Education and Training Department is to equip United Association locals with educational resources for developing the skills of their apprentices and journeyworkers. By thus facilitating the training needs of the membership, we maximize their employability and prepare them for changes in the industry. We are committed to making training opportunities available across North America, allowing members to acquire new skills and remain competitive in the industry regardless of geography. In this way, we are determined to meet the needs of the piping industry and enhance employment opportunities for our members, while remaining fiscally responsible to the beneficiaries of the fund.

"The procedures, policies, and course offerings set forth in this catalog are subject to revision from time to time. It will be updated on a regular basis to the most up-to-date versions of the policies, procedures, and course offerings and accessed at uanet.org."

Table of Contents

Calendar of Events

Saturday, August 9, 2025

8:00 a.m. to 4:30 p.m. ..... **Industry Sponsored Vendor Displays**
(Complimentary pastries and coffee served in the morning and hot dogs, chips, and beverages in the afternoon)

8:00 a.m. to 5:00 p.m. ..... **Instructor Training Program and the International Apprentice Contest Begin**

8:00 a.m. to 5:00 p.m. ..... **Registration**
Morris J. Lawrence Building, Lobby

8:00 a.m. to 5:00 p.m. ..... **UA and VIP Merchandis Store Open**
Morris J. Lawrence Building - ML 160

8:00 a.m. to 5:30 p.m. ..... **International Pipe Trades Joint Training Committee Bookstore Open**
Instructional Materials and Books
Morris J. Lawrence Building - ML 103

9:00 a.m. to 10:00 a.m. ..... **Faculty Registration**
Morris J. Lawrence Building, Lobby

9:00 a.m. to 12:00 p.m. ..... **Open Computer Lab**
Morris J. Lawrence Building - ML 126

10:00 a.m. to 11:00 a.m. ..... **Faculty Meeting for ALL Faculty (REQUIRED)**
Morris J. Lawrence Building, Towsley Auditorium

10:00 a.m. to 5: 00 p.m. ..... **Certification Updates**
(See p. 15 for workshop locations)

11:30 p.m. to 2:30 p.m. ..... **UA Tradeswomen Instructor Luncheon**
Student Center Community - SC 105

1:00 p.m. to 2:15 p.m. ..... **First-Year Student Meeting**
Morris J. Lawrence Building, Towsley Auditorium

1:00 p.m. to 4:00 p.m. ..... **Open Computer Lab**
Great Lakes Regional Training Center - ML 126

5:00 p.m. to 11:00 p.m. ..... **6th Annual ITP BIM Cup Cornhole Tournament**
Wolverine Pickleball
235 Metty Drive
Ann Arbor, MI 48103

Sunday, August 10, 2025

7:00 a.m. to 4:00 p.m. ..... **UA and VIP Merchandis Store Open**
Morris J. Lawrence Building - ML 160

7:30 a.m. to 5:30 p.m. ..... **International Pipe Trades Joint Training Committee Bookstore Open**
Instructional Materials and Books
Morris J. Lawrence Building - ML 103

8:00 a.m. to 9:00 a.m. ..... **UA Future Instructors Registration**
Morris J. Lawrence Building, Lobby

8:00 a.m. to 5:05 p.m. ..... **Instructor Training Program and the International Apprentice Contest Continue**

8:00 a.m. to 5:05 p.m. ..... **Pipe Pals Respite Room** (see p.7) - TI 218B

Monday, August 11, 2025

7:00 a.m. to 4:00 p.m. ..... **UA and VIP Merchandis Store Open**
Morris J. Lawrence Building - ML 160

7:30 a.m. to 5:30 p.m. ..... **International Pipe Trades Joint Training Committee Bookstore Open**
Instructional Materials and Books
Morris J. Lawrence Building - ML 103

8:00 a.m. to 5:05 p.m. ..... **Instructor Training Program and the International Apprentice Contest Continue**

8:00 a.m. to 5:05 p.m. ..... **Pipe Pals Respite Room** (see p.7) - TI 218B

6:00 p.m. to 10:00 p.m. ..... **UA BLOCK PARTY**
Main Street, Downtown Ann Arbor
6th Annual ITP BIM Cup Cornhole Tournament
Tournament bracket winners announced
Proceeds benefit the Semper Fi & America's Fund
Live Entertainment by Milwaukee Tool Shed Band

Tuesday, August 12, 2025

7:00 a.m. to 4:00 p.m. ..... **UA and VIP Merchandis Store Open**
Morris J. Lawrence Building - ML 160
7:30 a.m. to 5:30 p.m. ..... **International Pipe Trades Joint Training Committee Bookstore Open**
Instructional Materials and Books
Morris J. Lawrence Building - ML 103
8:00 a.m. to 5:05 p.m. ..... **Instructor Training Program and the International Apprentice Contest Continue**
8:00 a.m. to 5:05 p.m. ..... **Pipe Pals Respite Room** (see p.7) - TI 218B

Wednesday, August 13, 2025

7:30 a.m. to 1:30 p.m. ..... **UA and VIP Merchandis Store Open**
Morris J. Lawrence Building - ML 160
7:30 a.m. to 5:30 p.m. ..... **International Pipe Trades Joint Training Committee Bookstore Open**
Instructional Materials and Books
Morris J. Lawrence Building - ML 103
8:00 a.m. to 5:05 p.m. ..... **Instructor Training Program and the International Apprentice Contest Continue**
8:00 a.m. to 5:05 p.m. ..... **Pipe Pals Respite Room** (see p.7) - TI 218B
8:00 a.m. to 1:00 p.m. ..... **Industry Day**
8:00 a.m. to 9:00 a.m. ..... **Industry Day Registration**
Morris J. Lawrence Building, Lobby
9:00 a.m. to 10:00 a.m. ..... **Industry Day Welcome Event**
Morris J. Lawrence Building, Towsley Auditorium

Thursday, August 14, 2025

6:30 a.m. to 11:30 a.m. ..... **International Pipe Trades Joint Training Committee Bookstore Open**
Instructional Materials and Books
Morris J. Lawrence Building - ML 103
7:00 a.m. to 11:05 a.m. * ..... **Instructor Training Program Continues International Apprentice Contest Concludes**
7:00 a.m. to 11:05 a.m. ..... **Pipe Pals Respite Room** (see p.7) - TI 218B
3:00 p.m. to 5:30 p.m. ..... **Instructor Training Program Completion Ceremony/ International Apprentice Contest Winners Announced**
The George Gervin GameAbove (G3) Center
799 N. Hewitt Road
Ypsilanti, MI 48197

Friday, August 15, 2025

7:00 a.m. to 11:05 a.m. ..... **Instructor Training Program Concludes**
7:00 a.m. to 11:05 a.m. ..... **Pipe Pals Respite Room** (see p.7) - TI 218B

CLASSES MEET DAILY, SUNDAY THROUGH FRIDAY, AUGUST 10 - 15, 2025
STUDENTS MUST ATTEND ALL HOURS OF ALL CLASSES TO RECEIVE CREDIT

* *Note time change*

About the Instructor Training Program

The United Association (UA) has a continuing interest in the quality of our members' job performance. We believe that you, the UA instructors, are key to maintaining the high level of achievement for which we are known, and we are determined to retain our esteemed position in this regard.

The ability to create quality craftsmanship comes from good teaching. Therefore, we designed the United Association Instructor Training Program (ITP) specifically for you and your needs as instructors. Our aim is to help improve teaching techniques, diversify mechanical skills, and enhance knowledge of the scientific and technical elements of the trade. We encourage you to make the most of this unique opportunity. **Courses are ONLY available to instructors who are members**. Allowance for registration in certain classes may be granted by the UA Director of Education and Training.

Purpose

The Instructor Training Program for instructors of journeyworkers and apprentices is designed to:

- Increase UA instructors' proficiency of instructional techniques and materials.
- Acquaint instructors with the philosophy and principles of education, especially trade, industrial, and technical education.
- Provide learning experiences in the principles and the fundamentals of the applied knowledge subjects.
- Expand the understanding of our instructors in the technical aspects of the crafts and convey information to the instructors about the latest developments in this area.

Elements of the Program

200-Hour Instructor Certificate Program

This program is divided into two main elements of instruction: the professional element, which involves courses dealing with the principles and techniques of teaching, and the elective course element, which involves courses dealing with trade-specific technology and science.

Instructors in this program will take 100 hours of professional courses and 100 hours of elective courses.

120-Hour Coordinator Certificate Program

This program is designed for training coordinators/directors or members of the JATC operating the UA training program within their local. Individuals who successfully complete the required courses will then earn a coordinator certificate. These courses focus on UA-specific interests and administration of training programs.

Certificates

The title Certified Instructor of Journeyworkers and Apprentices in the Plumbing and Pipefitting Industry will be conferred on those who satisfactorily complete 200 hours of course work (including all required classes) in the Instructor Certificate Program.

The title Certified Coordinator of Journeyworkers and Apprentices in the Plumbing and Pipefitting Industry will be conferred on those who satisfactorily complete 120 hours of required courses in the Coordinator Certificate Program.

Achievement and Attendance

Your course instructor will evaluate your performance and the registrar will record your achievements in the form of grades. Each faculty member will utilize current grading system.

Transcripts may be available the week following ITP's conclusion. The transcript contains the name, course hours, and grades earned for each course. If you have any questions regarding transcripts, please contact the Registrar's office at UARegistrar@uanet.org, or by calling (410) 269-2009.

Registration

To be eligible for enrollment, an instructor must receive approval from his or her local union and must be an active or prospective instructor in a UA JATC training program. All registrants must have a valid email address. Course registration will be available online at https://uanet.org.

Official check-in for the program will be on Saturday, August 9th, in the lobby of the Morris J. Lawrence Building at Washtenaw Community College, 4800 East Huron River Drive, Ann Arbor, MI 48105.

IPT-JTC Bookstore

For instructional materials and books:

International Pipe Trades Joint Training Committee Bookstore
687-B Commerce Drive
Upper Marlboro, MD 20774
Telephone: 301-218-1241
Fax: 301-218-8961
E-Mail: iptbookstore@uanet.org
https://shop.iptbookstore.com

Technology Requirements

Before arriving to ITP make sure your computer or tablet meets the Canvas Computer and Browser Requirements.

Tablets: (such as an iPad), we recommend investing in a Bluetooth keyboard or other peripheral accessory to make typing easier.

Tablets should have the Canvas Student App installed before coming to campus.

Some classes require a laptop and cannot be completed with a tablet. These classes are *2012-UA/MCAA Foreman Certification; 5011-Industrial Rigging Certification for Instructors*; and *5012-UA Crane Signal Person Certification for Instructors*.

You may need to install updates or change some settings on your laptop when you get to campus. Please make sure your IT department has given you the necessary permissions. Campus/UA staff may be unable to help you if your computer is locked down by your local IT.

- Wifi on campus is free and open to the public. Select "wccnet" from your devices wifi menu to connect.
- Charging spaces may be limited in some classrooms. Learners are encouraged to charge all devices fully each night.

If you have any questions or concerns, please reach out to uahelp@wccnet.edu or 734-249-5966.

Grant Opportunities

The ITF will cover the cost of the textbooks that may be required for any course a U.S. instructor is attending.

Pipe Pals Respite Room: A Space for Support and Connection

This year the UA Pipe Pals (Peer Allies for Life Success) introduced a dedicated space for UA members seeking calm, connection, and peer support.

The Respite Room will be available during major UA/ITF events and conferences, providing a safe, confidential, and welcoming environment for members who may need a break from the day's activities. Whether you're looking for solitude, a quiet space to reflect, or a supportive conversation with a trained Peer Ally, this space is here for you.

Together, we continue to break the stigma and foster a stronger, safer, and more supportive UA family, because Mental Health Matters!

Safety Requirements for Personal Protective Equipment

Students must bring their own welding hood, welding jacket, and welding gloves. **These items will not be supplied**. Safety equipment and protective clothing are required for all shop classes. Safety requirements will be strictly enforced. Any student who fails to meet these safety requirements will not be permitted to participate in the activity and may be removed from class. If you are not sure of the requirements, ask your instructor.

Eye Protection
Eye protection conforming to ANSI Z87.1-2015 shall be used as primary protection. **Safety glasses are required in all shop classes and will be provided.** Prescription safety glasses with side shields must also be ANSI Z87.1-compliant. Over-glasses may be worn over prescription eyewear in lieu of prescription safety glasses.

Face Protection
Face shields shall be used as secondary protection over safety glasses when the task requires it. In addition, an arc-rated face shield and hardhat may be required for tasks where arc flash or arc blast hazards may exist in accordance with NEC 70E – 2024.

Welding Hoods
Welding hoods and head covering must meet industry standards and be approved by the faculty instructor. **You must bring a welding hood for welding classes**.

Hand Protection
Task-specific gloves appropriate for hot work or working with sharp objects MUST BE WORN FOR ALL SHOP CLASSES and approved by the faculty instructor. Hand protection may also include dielectric gloves with leather protectors for tasks requiring shock protection as required by NEC 70E – 2024.

Foot Protection
Sturdy work boots or shoes made of leather or similarly strong materials are required to be worn in all shop classes. **Sneakers or sandals are not permitted**.

Protective Clothing
Sturdy long sleeve shirts and long pants are required in all shop classes. Shorts are not permitted. In addition, arc-rated protective clothing may be required for the task being performed in accordance with NEC 70E – 2024.

CODE OF CONDUCT AND GUIDELINES FOR PARTICIPATION IN ITF-SPONSORED EVENTS

The United Association International Training Fund ("ITF") is committed to the principles of respect, honesty, integrity, and professionalism. As a UA member, you should be committed to adhering to the UA Standard for Excellence, which reflects the UA's commitment to deliver the highest levels of safety, quality, and productivity. When you participate in any event sponsored or hosted by the ITF, you are expected to meet and exceed these standards of professionalism and affirm the high standard of ethics and conduct. For clarity, the following has been assembled to provide direction on expectations and a code of conduct.

General Expectations – Ethical Principles:

It is expected that all participants, guests, and anyone else who attends an event sponsored by the ITF shall comply with the following principles at all times:

- Comply with all applicable rules, policies, and procedures.
- Be mindful of your surroundings and of other attendees, and recognize that we are guests in the facilities.
- Be considerate and respectful to each other.
- Be inclusive.
- Conduct yourself in a professional manner at all times, including during the event and while socializing with other attendees after hours.
- Respect diversity of opinions and ideas.
- You must not engage in harassing, discriminatory, or demeaning conduct.
- Refrain from the use of profanity and offensive language.
- Refrain from exclusionary behavior.
- Do not participate in or condone unlawful behavior or activity.
- Maintain a positive and professional environment.

Alcohol & Substance Use:

- Illegal drug use is prohibited during ITF-sponsored events.
- Alcohol is only permitted when offered at the venue (i.e., during a dinner or reception). Alcohol consumption should be done in moderation only. Excessive consumption and inappropriate behaviors will not be tolerated and may be grounds for removal from the event.

Use of Social Media:

The ITF recognizes the inherent value that technology and social media can bring to support the operation and success of the ITF, local training programs, the UA, and industry partners. By participating in ITF-sponsored events, you may be featured on social media platforms or in various communications. The ITF also acknowledges that many participants may share their activities on their personal social media accounts during the events.

All social media posts featuring, showing, or otherwise reflecting ITF-sponsored events are expected to meet the following guidelines:

- Show professionalism.
- Be courteous, respectful, ethical, and responsible.
- Refrain from posting content that is:
  - untruthful
  - defamatory
  - libelous
  - discriminatory
  - hateful
  - harassing
  - threatening
  - obscene
  - profane
  - vulgar
  - violates copyright, trademark, or other intellectual property right
  - proprietary or confidential

- Ensure that others are aware that any personal account or statements do not represent the ITF, local training program, the UA or industry partners.
- Avoid speaking on matters outside the field of expertise.
- Exercise discretion.
- Be respectful, polite, and patient when speaking or posting informaton in relation to the event.

Enforcement:

The ITF reserves the right to proceed with any and all actions to enforce this Code of Conduct or otherwise ensure safe and appropriate behavior. Enforcement actions may include penalties ranging from warnings to removal from the event. In each case, the Business Manager (and, if applicable, Training Coordinator) of the participant will be informed of such infractions and any covered costs related to the participant's atendance at the event may no longer be subject to support from the ITF.

Graduation Requirements and Procedures

Listed below are the graduation requirements for the two certificate programs offered by the UA.

200-Hour Instructor Certificate Program

To receive the UA Instructor Training Certificate, UA instructors must successfully complete a total of 200 credit hours. This includes 100 hours of required professional courses and 100 hours of elective courses.

Professional Courses

1001 (101) ..... Planning, Teaching, and Assessing Effective Lessons: Beginner
1002 (102) ..... Planning, Teaching, and Assessing Effective Lessons: Intermediate
1003 (103) ..... Planning, Teaching, and Assessing Effective Lessons: Advanced
1004 (104) ..... Devloping and Presenting Effective Lesson Plans
1010 (510) ..... Public Speaking (It is recommended to take 1002 and 1010 in the second year.)

Courses in parentheses denote former course numbers that count towards the requirement.

Plus 100 Credit Hours of Elective Courses

Coordinator courses (9000-series, 2100-2106) do not count towards the Instructor Certificate Program.

120-Hour Coordinator Certificate Program

To receive a certificate of completion, attendees must complete 120 hours of courses, including three required courses (60 hours) out of the six needed. Those who satisfactorily complete the program will be conferred the title Certified Coordinator of Journeyworkers and Apprentices in the Plumbing and Pipefitting Industry.

Three Required Courses

9001 (705 or 90)..... Apprenticeship Standard Guidelines
9002 (701, 707, or 91)..... Administration of a Jointly Managed Training Program
9003 (702 or 706)..... Understanding Legal Issues and Fiduciary Responsibilities

Courses in parentheses denote former course numbers that count towards the requirement.

Plus Three Coordinator Electives *(see next page)*

Three Coordinator Electives

2008 (520) ..... Labor History and the UA Part One: 1800 to 1920
2009 (521) ..... Labor History and the UA Part Two: 1920 to Present
2010 (522) ..... Labor History I and II
2100 (237) ..... Adapting Apprenticeship to Today's Student
2101 (372) ..... Financial Literacy for Apprentices
2102 (374) ..... Expanding Your Range When Recruiting
2104.....Effective Leadership and Committee Development
2105..... Workplace Professionalism
2106..... Recruitment Resources and Strategies
2171.....Introduction to Peer Support Skills and Mental Health Literacy
2172.....Advanced Skills in Suicide Prevention Training, Peer Support Skills, and Mental Health Literacy
3006 (373) .....Preparing for Digital Literacy
9000 (700) ..... Administration of a Training Program for New Training Coordinators
9004 (703) ..... Managing Financial Operations of a Training Program
9005 (704) ..... Enhancing Training Through the Use of UA Applications
9006 (710 or 97) ..... Addressing Barriers to Apprentice Success
9007 (711) ..... Veterans in Apprenticeship
9008 (712) ..... Using the Multi-Craft Core Curriculum (MC3)
9009..... Internal and External Communication for Training Directors
9010..... Apprentice Selection Procedures - Interview Selection Process
9017..... After the Fight: Welcoming Our Heroes to the UA
9100 (708)..... Apprenticeship Development Canadians
9101..... Canadian Coordinator Program
9102..... Canadian Welder Assessment Program
9103..... Canadian Coordinators Union Training Innovation Program
9105..... UA Canada Training Director/Coordinator Program
9106..... UA Canada and CWBi Acorn Welding Program

Note: Not all courses listed above are available at the 2025 Instructor Training Program.

Continuing Education: Certificate and Associate Degree Opportunities

UA at Washtenaw Community College

Washtenaw Community College (WCC) educational partnership with the UA provides members with certificate and associate degree opportunities. As a benefit of the United Association/Washtenaw Community College partnership, UA instructors will receive college credit for their coursework completed at the Instructor Training Program. These credits can be used to earn an associate degree. Additional degree requirements can be completed through WCC's online courses or transferred in from other higher-learning institutions.

To earn an associate degree, instructors will need to complete the following:

- UA Apprenticeship since August 1, 2000 or the UA STAR® exam..... 45 Credits
- UA Instructor Certification..... 15 Credits*
- General Education Requirements..... 13-31 Credits

Washtenaw Community College's Online Courses

With more than 150 online courses, WCC offers you the general education courses that you need to finish your associate degree. Most courses are transferable to a four-year college or university. If you have completed prior college, the credits may also be transferable to WCC toward the associate degree.

Online education offers you the opportunity to study whenever it fits into your life—whether that's at 5 am before the kids wake up, on your lunch hour, or for a few hours at night. Online education allows you to fit education into your life instead of reorganizing your life around education.

Online learners do need to be independent, motivated, and self-starters. Online courses do have deadlines. You can access your course information at any time, as long as you have a Windows PC or equivalent Mac computer with a high-speed Internet connection.

Please contact Kandi Jurek at WCC Student Services with any questions.

Kandi Jurek, Manager, UA Programs
Telephone: 1-888-232-5476
Email: kjurek@wccnet.edu
Website: www.wccnet.edu/uaprograms

* Some Regional and/or ITP courses may not be applied towards a WCC associate degree. Please contact Kandi Jurek with any questions.

Nine-Year Recertification for CWI®

A minimum of 80 professional development hours (PDHs) must be earned (training received or instruction delivered) during the nine-year certification period, and 20 of the 80 PDHs must be earned in the final three year period of your nine-year certification period.

Instructors who want to substitute teaching hours for the required PDHs shall submit documentation of the hours of training performed. Such documentation shall include a complete syllabus of subjects taught, a copy of the certificates of attendance or completion issued, the number of students attending, the dates of the training provided, and documentation that the training was a formal offering and not personal coaching, tutoring, or individual instruction delivered to meet job requirements.

A maximum of 80 PDHs are allowed for any one course.

Credit for a particular course may only be granted once in a nine-year period. For example: a single 40-hour course taught any number of times can only be used to fulfill 40 hours of the 80 hours required for recertification without examination.

Trainers who want to substitute teaching hours for the required PDHs shall submit documentation of the hours of training performed. Such documentation shall include a complete syllabus of subjects taught, a copy of the certificates of attendance or completion issued, the number of students attending, the dates of the training provided, and documentation that the training was a formal offering and not personal coaching, tutoring, or individual instruction delivered to meet job requirements. For more information please visit www.aws.org.

UA Courses Acceptable for Use as PDHs:

Endorsements

You can take an endorsement exam to recertify during the six months prior to your expiration date. Passing one of these exams meets the requirements for recertification. Endorsements require passing a two-hour exam on one of the following:

Endorsements Eligible for Nine-Year Recertification Credit

AWS D1.1 Structural Steel	ASME Section IX, B31.1 and B31.3
AWS D1.2 Structural Aluminum	Boiler and Pressure Vessel
AWS D1.5 Bridges	ASME Section VIII, Div. 1 and Section IX
AWS D15.1 Railroad	Boiler and Pressure Vessel
AWS D17.1 Aerospace	Structural Drawing Reading
API 1104 Pipelines	

Nine-Year Recertification for CWI®

Or 80 Hours in the Following

Arc Welding Practical Fundamentals and Theory
Applied Metallurgy
Piping Codes for Industrial Work
Orbital Tube Welding Oxy-Fuel Cutting and Welding
Advanced Orbital Welding
Teaching Orbital Welding
Machine Cutting, Severing, and Beveling
ASME Section B31.1 Code
Methods in Teaching Downhill Welding
Teaching Shielded Metal Arc Welding (SMAW)
Innovative Welding Techniques
Emerging Welding Technologies
Teaching Gas Tungsten Arc Welding (GTAW)
Radiographic Film Interpretation
ASME Section IX Welding Code
Advanced Gas Tungsten Arc Welding (GTAW)
TIP TIG® Wire Feed Welding Process
Advanced Shielding Metal Arc Welding (SMAW)
Advanced Gas Metal Arc Welding (GMAW)
Authorized Testing Representative Refresher
Authorized Testing Representative
OSHA 500
Certified Wire Feed Machine Orbital Welding
Orbital Wire Feed Remote Video Welding Systems
AWS CWI Preparation
Principles of Arc Welding Processes, Welder and Weld Process Qualification, and Metallurgy NPE (OSU)
Weld Metallurgy, Defects, and Discontinuities for Process Piping Material (OSU)
NDE for Process Piping (OSU)
Principles of Welding Processes and Welding Design (OSU)
Principles of Welding Design (OSU)

Certification Workshops and Fees

CERTIFICATION WORKSHOPS

Backflow Prevention Assembly Tester Recertification

Prerequisite: Must have a current certification or no more than six months past expiration.

Certification fees apply and are the responsibility of the student. See fee schedule.

UA instructors wanting to update their Backflow Prevention Assembly Tester Certification may sign up for this four-hour, non-credit course, which will provide a review of installation requirements and testing procedures for backflow prevention assemblies. UA instructors who pass a written examination and practical testing of the required assemblies will be recertified for three years. Reciprocation of approved non-ASSE Backflow Prevention Assembly Tester Certifications will be included in the renewal. All reference material will be provided. No textbooks required. Instructors wishing to recertify must provide proof of an approved backflow prevention assembly tester certification. **Personal protective equipment is required for all shop classes. Please refer to the safety requirements.**

Date: Saturday, August 9, 2025
Time: 10:00 am - 2:00 pm
Room: SRB 127
Instructor: J. Kajak

STAR Certification/Recertification Exam

Certification fees apply and are the responsibility of the student. See fee schedule.

This will be a NITC proctored STAR Certification/Recertification exam.

Date: Saturday, August 9, 2025
Time: 10:00 am - 4:00 pm
Room: GM 200, Computer Commons
Instructor: D.J. Berger

Adult Life Support/First Aid Recertification Exam

Certification fees apply and are the responsibility of the student. See fee schedule.

Date: Saturday, August 9, 2025
Times: 8:00 am - 12:00 pm;
1:00 pm - 5:00 pm
Room: GM 332
Instructor: C. Coyne/M. Coyne

ASSE 12010 Recertification Infection Control Risk Assessment (ICRA)

Certification fees apply and are the responsibility of the student. See fee schedule.

Date: Saturday, August 9, 2025
Time: 1:00 pm - 5:00 pm
Room: LA 352
Instructor: D. Molnar

ASSE 13010 Recertification Exam: Plumbing Service Technicians

Certification fees apply and are the responsibility of the student. See fee schedule.

Date: Saturday, August 9, 2025
Time: 1:00 pm - 5:00 pm
Room: GM 215
Instructor: R. Abruscati

OSHA 502 Reauthorization (Required for Course 2142)

Mandatory attendance is required by all attendees in Course 2142 - OSHA 502 Update for Construction Industry Outreach Trainers (20-hour)

Date: Saturday, August 9, 2025
Time: 1:00 pm - 5:00 pm
Room: LA 340
Instructors: W. Walker/J. Berger

VitalCog

VitalCog is a construction industry-based workshop that trains workers of all levels to appreciate the critical need for suicide prevention, foster open conversations, and promote mental health resources in construction. Participants will gain essential knowledge and skills in identifying risk factors and warning signs that can increase the potential for suicide, how to start a conversation with someone you may be concerned about, and how to guide someone toward these critical resources so they can obtain the help that they may need.

Date: Saturday, August 9, 2025
Times: 9:00 am - 11:00 am;
1:00 pm - 3:00 pm
Room: BE 140
Instructosr: J. Hock/O. Galindo

Certification Workshops and Fees

CERTIFICATION FEES

Certification fees are the responsibility of the student. **Grades and certifications will not be awarded until all fees are paid.**

Backflow Certification Fees:
(Payable to ASSE International)
Backflow Tester = $150.00
Backflow Repairer = $150.00
Cross-Connection Control Surveyor = $150.00
Recertification = $100.00

Service Plumber Certification Fees:
(Payable to ASSE International)
13010 Certification = $150.00
13010 Recertification = $100.00

Water Treatment Equipment Personnel Fees:
(Payable to ASSE International)
22000-10 Certification = $150.00

Infection Control Certification Fees:
(Payable to ASSE International)
12010 Certification = $150.00
12010 Recertification = $100.00

ITM of Fire Protection Systems Certification Fees:
(Payable to ASSE International)
15010 Technician Recertification = $100.00

Special Hazard Training
(Payable to ASSE International)
27010 Certification Installation of Hybrid Fire Extinguishing Systems = $150.00
27020 Certification Inspection, Testing, and Maintenance of Hybrid Fire Extinguishing Systems = $150.00

Medical Gas Instructor Certification Fees:
(Payable to NITC by July 15, 2025)
Contact Renee Yount at 877-457-6482
Certification = $130.00
Instructor Recertification = $60.00

STAR Exam Fees:
(Payable to NITC by July 15, 2025)
Contact Inez Perez at 877-457-6482
Certification = $150.00
Recertification = $100.00

Adult Basic Life Support/First Aid:
(Payable to Coyne First Aid)
Recertification = $110.00

Course List

NEW COURSES FOR 2025

COORDINATOR, DIRECTOR, OR JOINT APPRENTICESHIP COMMITTEE MEMBER REQUIRED COURSES

COORDINATOR, DIRECTOR, OR JOINT APPRENTICESHIP COMMITTEE MEMBER ELECTIVE COURSES

REQUIRED PROFESSIONAL COURSES

ELECTIVE COURSES

Course List

(*) Prerequisite

1001 Planning, Teaching, and Assessing Effective Lessons: Beginning

Students must bring a laptop.

In this course, students will identify the fundamentals of effectively teaching adult learners through course lesson planning while recognizing and accommodating different learning styles. Students will establish a culture of inclusive learning to promote a barrier-free educational experience and structured learning atmosphere through routines and procedures, fostering a culture of shared accountability for course learning outcomes. Students will create a lesson plan with clear objectives, assessments, and the steps involved. Bring the textbooks, lesson plans, quizzes, and tests for a course that will be taught at the local. If an instructor does not have a specific teaching assignment, work with the local union training coordinator to select a course that will be taught in the future and bring those materials.

Sec	Time	Location	Instructor
1	8:00 am-12:05 pm	TI 112	J. Strip
2	1:00 pm - 5:05 pm	TI 112	J. Strip
3	8:00 am - 12:05 pm	TI 131	J. Peet
4	1:00 pm - 5:05 pm	TI 131	J. Peet
5	8:00 am - 12:05 pm	TI 114	N. Cullin
6	1:00 pm - 5:05 pm	TI 114	N. Cullin
7	8:00 am - 12:05 pm	BE 180	C. Johnson
8	1:00 pm - 5:05 pm	BE 180	C. Johnson
9	8:00 am - 12:05 pm	BE 250	D. Coughlin
10	1:00 pm - 5:05 pm	BE 250	D. Coughlin
11	8:00 am - 12:05 pm	TI 129	L. Coleman
12	1:00 pm - 5:05 pm	TI 129	L. Coleman
13	8:00 am - 12:05 pm	TI 137	P. Wellman
14	1:00 pm - 5:05 pm	TI 137	P. Wellman
15	8:00 am - 12:05 pm	BE 260	TBD
16	1:00 pm - 5:05 pm	BE 260	TBD
17	8:00 am - 12:05 pm	BE 282	E. Smith
18	1:00 pm - 5:05 pm	BE 282	E. Smith
19	8:00 am - 12:05 pm	BE 110	TBD
20	8:00 am - 12:05 pm	GL 202	J. Slaughter

1002 Planning, Teaching, and Assessing Effective Lessons: Intermediate

Students must bring a laptop.
Students should also have materials for a course they expect to teach.

In this course, students will learn to enhance engagement and accommodate diverse learning styles by integrating open-ended questions and visual aids within lesson plans. Focusing on crafting open-ended questions, incorporating visual aids, activating prior knowledge, aligning objectives with Bloom's Taxonomy, implementing effective instructional strategies, assessing learning outcomes, planning group work, and integrating group work into lesson plans. Students will create a comprehensive lesson plan incorporating these pedagogical approaches to foster collaborative, critical thinking focused learning experiences.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 172	C. Kraft
2	1:00 pm - 5:05 pm	BE 172	C. Kraft
3	8:00 am - 12:05 pm	BE 160	J. Runyan
4	1:00 pm - 5:05 pm	BE 160	J. Runyan
5	8:00 am - 12:05 pm	BE 158	L. Odom
6	1:00 pm - 5:05 pm	BE 158	L. Odom
7	8:00 am - 12:05 pm	BE 171	A. Roelofs
8	1:00 pm - 5:05 pm	BE 171	A. Roelofs
9	8:00 am - 12:05 pm	BE 176	G. Houghton
10	1:00 pm - 5:05 pm	BE 176	G. Houghton
11	8:00 am - 12:05 pm	LA 235	TBD
12	1:00 pm - 5:05 pm	LA 235	TBD
13	8:00 am - 12:05 pm	LA 240	C. Fray
14	8:00 am - 12:05 pm	LA 111	C. Douglas

ITP Courses

1003 Planning, Teaching, and Assessing Effective Lessons: Advanced

Students must bring a laptop.

Students should have specific lesson plans and assessments to use in teaching at their local union

In this course, students will explore interactive teaching methods designed to empower educators with the tools to craft engaging lesson plans that foster student collaboration. Through practical exercises and discussions, participants will learn to integrate interactive teaching strategies, construct purpose-driven assessment rubrics, and adapt trade-specific vocabulary to align with curriculum standards. Students will develop a comprehensive lesson plan, an assessment rubric, and a teaching outline enriched with interactive elements and tailored vocabulary.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 316	J. Klapper
2	1:00 pm - 5:05 pm	GM 316	J. Klapper
3	8:00 am - 12:05 pm	GM 315	J. Klapper
4	1:00 pm - 5:05 pm	GM 315	J. Klapper
5	8:00 am - 12:05 pm	GM 317	B. Corie
6	1:00 pm - 5:05 pm	GM 317	B. Corie
7	8:00 am - 12:05 pm	GM 327	TBD
8	1:00 pm - 5:05 pm	GM 327	TBD
9	8:00 am - 12:05 pm	GM 323	D. Samuels
10	1:00 pm - 5:05 pm	GM 323	D. Samuels

1004 Developing and Presenting Effective Lesson Plans

Students must bring a laptop.

Students must bring course materials to create or redesign a course.

In this course, students will create a comprehensive course syllabus and construct effective lesson plans. Through a blend of theoretical frame works and practical applications, participants will learn to craft syllabi that articulate clear course descriptions, outline specific learning outcomes, delineate objectives, and establish assessment criteria. Moreover, they will develop the ability to design five consecutive lesson plans with precise objectives, engaging instructional activities, and authentic assessments, fostering an environment where students are empowered to take ownership of their learning journey.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 326	M. Greathead
2	1:00 pm - 5:05 pm	LA 326	M. Greathead
3	8:00 am - 12:05 pm	LA 331	C. Littlefield
4	1:00 pm - 5:05 pm	LA 331	C. Littlefield
5	8:00 am - 12:05 pm	LA 333	R. Pickell
6	1:00 pm - 5:05 pm	LA 333	R. Pickell
7	8:00 am - 12:05 pm	LA 324	J. Gribble
8	1:00 pm - 5:05 pm	LA 324	J. Gribble

1010 Public Speaking

Students must bring a laptop.

This course is designed to help UA instructors acquire essential speaking and listening skills for the classroom. Class exercises will focus on the delivery of lecture material and conducting demonstrations. Instructors will polish organizational and delivery skills and gain a heightened awareness of the relationship between a speaker and an audience. UA students are encouraged to bring materials from classes they are currently teaching as resources for class exercises.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 128	A. Fournier
2	1:00 pm - 5:05 pm	LA 128	A. Fournier
3	8:00 am - 12:05 pm	LA 124	M Brooks

4	1:00 pm - 5:05 pm	LA 124	M. Brooks
5	8:00 am - 12:05 pm	TI 116	K. Shaper
6	1:00 pm - 5:05 pm	TI 116	K. Shaper
7	8:00 am - 12:05 pm	TI 118	A. Johnson
8	1:00 pm - 5:05 pm	TI 118	A. Johnson
9	8:00 am - 12:05 pm	LA 359	M. Covington
10	1:00 pm - 5:05 pm	LA 359	M. Covington
11	8:00 am - 12:05 pm	LA 231	C. Sparklin
12	1:00 pm - 5:05 pm	LA 231	C. Sparklin

2001 Methods in Teaching Pipe Trades Applied Mathematics

Students must bring a laptop.

This course is designed to prepare the student for teaching pipe trades mathematics to apprentices and journeyworkers. It will help students learn how to teach pipe trades math and also will serve as a refresher course on subjects such as offsets, metric systems, and calculators. Class time will consist of daily lectures and discussions on topics such as teaching styles, testing and exams, and applying mathematics to the pipe fitting industry. The student also will be introduced to the math curriculum on Canvas LMS.

Required textbooks or resource materials: *Related Mathematics (R/23), Piping Handbook and Offset Formulas*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 240	K. Askam/M. Shutt
2	1:00 pm - 5:05 pm	BE 240	K. Askam/M. Shutt

2003 Methods in Teaching Related Science

Students must bring a laptop.

This course combines the principles of science and piping systems for pipe tradesworkers. Through teaching demonstrations, experiments, and discussions, science principles will be applied to all portions of the pipefitting trade. These demonstrations will include heat/pressure effects on liquids and gases (fluid dynamics), metallic and nonmetallic piping materials, chemical reactions, and mechanics. Participants will be able to apply scientific concepts to piping obstacles in all aspects of the piping trades. Additional objectives are to assist instructors with ideas and teaching resources for the locals and to create a parallel understanding for all trades sciences.

Required textbooks or resource materials: *Related Science (R/22)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 314	C. Davis/B. Scheller
2	1:00 pm - 5:05 pm	LA 314	C. Davis/B. Scheller

2004 Methods of Teaching Drawing Interpretation and Plan Reading

Students must bring a laptop.

In this course, students will develop and enhance their teaching skills in drawing interpretation. The course's main focus will be on understanding the basics of plan and elevation drawings, as well as developing grading criteria and exceeding the time length for each assignment. Students will explore the UA's Interactive Curriculum App as it is designed to take pages of the textbooks and overlay Augmented Reality (AR) above a live view world utilizing the camera on your phone or tablet.

Required textbooks or resource materials: *Drawing Interpretation and Plan Reading (R/00)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 225	T. Cahill/M. Holden
2	1:00 pm - 5:05 pm	LA 225	T. Cahill/M. Holden

ITP Courses

2006 Basic Electricity

Students must bring a laptop.

This course will cover and present the best teaching methods for safely using and working with electricity on-the-jobsite. Electrical theory will be covered to promote an understanding of voltage, amperage, and resistance, with specific emphasis on the safe use of power tools on the job. Ground fault circuits (GFCI), circuit breakers, fuses, and circuit capacities will be discussed, along with the proper use of electrical multi-meters for basic electrical readings. The curriculum will be offered through presentations, hands-on, and supplemental learning software. The UA instructor will also be introduced to the UA software developed for use on Canvas LMS. The UA instructor will learn how to customize UA Circuit Builder software for enhancing the learning experience at their local training centers. **Personal protective equipment is required. Please refer to the safety requirements**.

Required textbooks or resource materials: *Basic Electricity (R/15)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	TI 145	A. Fala/C. Ponton

2007 Adult Basic Life Support

Students must bring a laptop.

This course will train and/or certify the UA instructor in conducting adult basic life support. This includes cardiopulmonary resuscitation; automated external defibrillation and related subjects, such as initial care for angina, stroke, and foreign body airway obstruction. The basic first aid portion includes procedures for emergency movement of the injured; wounds/bleeding; traumatic shock; fractures; burns with special emphasis on accidental electrical contact; eye injuries; allergic reactions; seizures; drug overdoses; temperature-related problems; and many other job-related emergencies. Upon successful completion of this course, the UA instructor will be able to teach and certify other UA members in this course. This program has been officially accepted by the U.S. Department of Labor - Occupational Health and Safety Administration (OSHA), as well as other federal and state agencies.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 332	C. Coyne/M. Coyne
2	1:00 pm - 5:05 pm	GM 332	C. Coyne/M. Coyne

2008 Labor History and the UA Part I: 1600s - 1920s

Students must bring a laptop.

Labor History and the UA covers the development of the trade union movement in North America from 1800 to 1920. The class covers this turbulent time in the early decades of organized labor, the obstacles and challenges that had to be overcome, and the leaders who helped shape the movement during its first century.

Required textbooks or resource materials: *The Rise of the United Association (Segal); Labor in America, 9th Edition (Dubofsky/McCartin)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 241	R. Lyle/M. Quinn

2009 Labor History and the UA Part II: 1930 to Present

Students must bring a laptop.

This course explores the history of work, technology, trade unions, government policy related to business and labor, and globalization from the 1930s to the present. The Great Depression created the conditions for an unprecedented social, economic, and political crisis in North America. The changes brought forth by the business depression included the emergence of more fully modern societies in the United States and Canada

and a much larger and diverse organized labor movement presence in both nations. As the trade union movement reached its apex of power and influence in the decades following the Second World War, so too did it sow the seeds that would lead to setbacks and challenges in more recent times. As it has done throughout its history, the United Association met these challenges through innovative approaches to new technology, training, and organization.

Required textbooks or resource materials: *The United Association 1924 - 1989 (Griffith); Labor in America, 9th Edition (Dubofsky/McCartin)*

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 241	R. Lyle/M. Quinn

2011 Operation of the UA Trailers

Students must bring a laptop.

Students participating in this course will learn how to present classes utilizing the equipment and trainers contained within the UA training trailers as they apply to the mechanical and plumbing systems installed and serviced by UA members. Participants will learn the best practices for teaching with the training trailers. Trailer and equipment safety, proper trailer setup and repacking, and operation of the onboard generator, audio video systems, fuel, electrical, and water hookup will be covered. The training trailers used in this course are the plumbing service, welding, sustainable technologies trades training, and service tech mobile lab. Event scheduling and transportation policies will be covered. This course is held outdoors. Students should bring sunglasses and rain gear. **Personal protective equipment is required. Please refer to the safety requirements.**

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GL 102	R. Gale/G. Korn

2012 UA/MCAA Foreman Certification

Maximum Registrants per Local: 1

Students must bring a laptop.

This course enables students to implement the UA Foreman Certification Program at their home local. It covers topics critical to the workplace and jobsite supervision, including leadership, relationships, documentation, planning and scheduling the work, safety, coordinating subcontractors and suppliers, and measuring and managing productivity. Understanding the Full Cost of an Hour of Labor and the Standard for Excellence will be discussed.

Required textbooks or resource materials: *UA Foreman Training Manual (U/22)*

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	GM 314	T. Kimbro/C. Hubler

2015 Principles of Project Management

Students must bring a laptop.

In this course, students examine construction project management and the responsibilities of a project manager. Students will be able to define and chart the life cycle of a construction project from conception to completion, including estimates, templates, and warranty items. Administrative processes and responsibilities of trade and business are explained and discussed using a sample project and flow chart.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 131	K. Crosby
2	1:00 pm - 5:05 pm	LA 131	K. Crosby

ITP Courses

2016 Introduction to Service Management

Students must bring a laptop.

Learn the skills needed to successfully transition from being a service tech to a key position in an HVACR or plumbing service company. The focus will be on the interpersonal skills and active responsibilities required to be successful. This class will be interactive and is modeled after real-world challenges that occur in a service company. The instructor will utilize lectures, small group assignments, interactive demonstrations, and review and discussion of best practices in the HVACR and plumbing service industry.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GL 103	R. Dee/T. Hammack

2095 Advanced Plan Reading

Maximum Registrants per Local: 1

Students must bring a laptop and a mouse.

This course focuses on the process of interpreting, analyzing, problem solving, and the implementation skills associated with the use of construction documentation to coordinate piping systems. Lessons are based on materials from the Advanced Plan Reading textbook, construction documentation associated with the text to include full construction documentation in pdf format, and virtual 3D models which are digital replicas of the Great Lakes Training Center. This class will also focus on utilizing the latest technologies with a special emphasis on identifying and applying techniques using new digital tools for the plan reading process. At the conclusion of this course students will be able to present the process of interpreting, analyzing, problem solving, and implementation of information to construct a piping system by navigating the specifications, submittals, and construction drawings utilizing modern software to enhance the plan reading process.

Required textbooks or resource materials: *Advanced Plan Reading and Related Drawing (R/22)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 110	R. Sherr/R. Holliday/R. Warner
2	1:00 pm - 5:05 pm	LA 110	R. Sherr/R. Holliday/R. Warner

2100 Adapting Apprenticeship to Today's Student

Students must bring a laptop.

In this course, students will explore differences in social identity attributed to age cohort and other factors that impact the interactions between training center staff and the apprentice population. Students will be introduced to the benefits and pitfalls associated with managing social media accounts. Students will be tasked to formulate solutions to common recruitment and retainment challenges. Recommended for but not limited to Training Coordinator/Directors.

Required textbooks or resource materials: *Not Everyone Gets a Trophy: How to Manage Millennials (Tulgan); Managing Generation Z: How to Recruit, Onboard, Develop, and Retain the Newest Generation in the Workplace (Paggi & Clowes)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 334	D. Fortini/J. Brock
2	1:00 pm - 5:05 pm	GM 334	D. Fortini/J. Brock

2101 Financial Literacy for Apprentices

Students must bring a laptop.

Over the past few years, training directors and coordinators running apprenticeship programs have experienced a different set of challenges regarding apprentices entering the program. Given the nature of

the trade, which can be "feast or famine," it is important to ask, "Does our program equip our apprentices with the skills to manage their finances when they could be faced with short or long periods of unemployment?" To combat this, many apprenticeship programs have included instruction on life skills including financial literacy. In this course, examples of financial resources available for use in teaching financial literacy will be presented and discussed. Individuals interested in instituting a financial literacy training program in their apprenticeship training programs are encouraged to attend. This course will consist of a combination of lectures and discussion and will include instruction on a new online simulation training program.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 232	T. Barrett
2	1:00 pm - 5:05 pm	LA 232	T. Barrett

2105 Workplace Professionalism

Students must bring a laptop.

This course is designed for Training Coordinators and UA leaders to foster professional and inclusive environments at our training centers. Participants will receive uniform guidance to consistently nurture positive and inclusive learning spaces. The curriculum covers crucial topics such as equity, equal opportunity, protected classes, anti-harassment, discrimination, and diversity and inclusion, while emphasizing preventing discrimination in all forms. In this highly interactive and engaging course, practical examples with group exercises in ethical decision-making will be presented and modeled.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	TI 128	P. Moss/L. Rollings
2	1:00 pm - 5:05 pm	TI 128	P. Moss/L. Rollings

2106 Recruitment Resources and Strategies

Students must bring a laptop

Explore the many recruitment tools and marketing opportunities available to training coordinators to attract the next generation of UA apprentices. Participants will create and print brochures, push cards, and videos designed to explain the benefits of joining an apprenticeship within the United Association. Discuss the pros and cons of social media and learn about Google, Facebook, YouTube, and other websites and online tools. Create a recruitment marketing plan to make your recruitment goals a reality.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	GM 309	D. Cannon/D. Vukovich

2142 OSHA 502 Update for Construction Industry Outreach Trainers (20-hour)

*Prerequisite(s): Active Authorized Trainer Card, and **must** complete the Saturday OSHA 502 Workshop #11*

Students must bring a laptop.

Please reference the OSHA Trainer Reauthorization Change effective January 1, 2019. Students must be approved to attend by CPWR. Contact the UA Registrar's Office for details on the approval process.
This course is designed for instructors who have completed OSHA 500 and plan to attend the Saturday Workshop #11 at the Instructor Training Program. OSHA requires that these instructors stay current on OSHA standards, and they must take OSHA 502 every four years to maintain their status. Course participants will receive updates on topics including OSHA construction standards, policies, and regulations. Participants who successfully complete this course along with Workshop #11 will receive a completion card acknowledging that they have completed the required training to continue as OSHA-Authorized Construction Trainers in

accordance with OSHA Outreach Training Program requirements.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 323	J. Berger/W. Walker

2150 OSHA 510 OSHA Standards for the Construction Industry

Students must bring a laptop.

This course, the prerequisite for Course 2151 OSHA 500, covers construction safety and health principles and OSHA policies, procedures, and standards as they apply to the construction industry. Topics also include the scope and application of the OSHA construction standards. Special emphasis is placed on those areas that are the most hazardous, using OSHA standards as a guide.

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	LA 243	T. Carrigan/J. Young

2151 OSHA 500 Trainer Course in Occupational Safety and Health Standards for Construction

Prerequisite: 2150 OSHA 510 OSHA Standards for the Construction Industry, Five years of construction work experience.

Students must bring a laptop.

Please reference the OSHA Trainer Reauthorization Change effective January 1, 2019. Students must be approved to attend by CPWR. Contact the UA Registrar's Office for details on the approval process.
Upon successful completion, this course authorizes UA instructors to teach the OSHA 10-hour and the OSHA 30-hour construction safety and health outreach programs at their respective locals. Special emphasis is placed on adult learning principles and training techniques to identify, define, and explain construction industry hazards and acceptable corrective measures as required in the programs using 29 CFR 1926 OSHA Construction Standards as a guide. This course also covers the effective use of electronic visual aids and handouts. Each participant will receive a certificate card acknowledging that they have completed the required training to be designated as an OSHA Authorized Construction Trainer by OSHA Outreach Training Program requirements.

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	LA 211	M. Baptista/A. Kiesling/W. Marable

2154 Safe Bolting Principles Practices

Students must bring a laptop.

Participants in this course will be provided with the knowledge and skills to assemble bolted flange joints safely and properly. Participants will learn how to inspect, assemble, and tighten bolted joint connections using industry-required controlled bolting procedures, including pressure boundary flanged joint assembly practices, terminology, tooling, and related technical areas, including safety. Additionally, participants will become proficient in power torquing and tensioning. Course participants will receive an OSHA 7110 certificate, which allows them to conduct bolted joint training at the local level. Participating UA members will receive a UA/CPWR/HYTORC completion card when this training is offered at the local training center.
Personal protective equipment is required. Please refer to the safety requirements.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 218	P. Stout/T. Baptie
2	1:00 pm - 5:05 pm	LA 218	P. Stout/T. Baptie

2157 Infection Control Risk Assessment (ICRA) Practitioner

UA instructors who wish to be certified as ICRA practitioners under the ASSE Series 12000 Standard must receive a passing grade on the written and practical exams.
Certification fees apply and are the responsibility of the student. See fee schedule.
Students must bring a laptop.

This course will cover and present the best teaching methods on how to prevent the spread of hospital-acquired infections (HAI). The materials presented will be an all-hazard approach for patient and worker protection. The infection control risk assessment (ICRA) practitioner will learn to work within appropriate barriers, define waste removal procedures, and monitor areas of construction adjacent to patients. Participants will be introduced to critical elements of the ASSE Series 12000 Standard, including biological pathogens, waterborne pathogens, and contamination/infection prevention procedures. Additionally, the course will include basic knowledge of analyzing the risk of legionella for building water systems. Participants will learn how to communicate with hospital personnel and how to work within project specifications. Attendees will learn how to create a class for their home local to qualify members to work on all types of hospital projects. Certification to the ASSE Series 12000 Professional Qualifications Standard for the Health and Safety of Construction and Maintenance Personnel will be available after the course. Attendance will fast-track the application process for the attendee to become an ASSE-approved instructor or proctor for the 12000 certifications.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 352	D. Molnar

2160 Safe Pressure Testing for Piping Systems

Students must bring a laptop.

This course provides information on different methods for conducting safe pressure testing operations, associated hazards, and necessary precautions. Safety will be the primary focus. Students will identify and demonstrate safe working practices required to successfully plan, perform, and document pressure tests on industrial, plumbing, and refrigeration piping systems. Pressure test demonstrations will use a combination of detailed images, videos, and interactive hands-on exercises. **Personal protective equipment is required. Please refer to the safety requirements.**

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 313	D. Heiss/R. Westbrook
2	1:00 pm - 5:05 pm	GM 313	D. Heiss/R. Westbrook

2163 NFPA® 70E® Electrical Safety Train-the-Trainer Course

Students must bring a laptop.

This course will help UA instructors promote electrical safety on the job site by preparing them to deliver a 1-Day NFPA® 70E®Class to local members. This NFPA® 70E® Train-the-Trainer course uses activities, exercises, videos, job aids, and hands-on exercises to help UA instructors be confident and competent in training on electrical safety topics and relevant policies and procedures as well as compliance with OSHA 1910 Subpart S and OSHA 1926 Subpart K. Upon successful completion of the course, attendees will be able to teach the 1-Day NFPA® 70E® Class to include how NFPA® 70E® standards and OSHA requirements promote electrical safety, establishing an electrically safe working condition, justification of energized work, and proper use of personal protective equipment and testing equipment for energized work.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 207	J. Kjome/R. Neiderheiser
2	1:00 pm - 5:05 pm	GM 207	J. Kjome/R. Neiderheiser

ITP Courses

2170 Opioids and the Workplace: Prevention and Response

Students must bring a laptop.

Opioids and substance use disorder is impacting the construction industry six times greater than other industries. This course is designed to prepare attendees to instruct and facilitate the National Institute of Environmental Health Sciences (NIEHS) Opioids and the Workplace: Prevention and Response training at the local level. Upon completion, participants will be able to discuss the scope and severity of the opioid crisis, summarize the relationship between workplace injuries and illnesses, working conditions, and opioid use disorder, identify risks of occupational exposure and potential steps for prevention and response, and identify, inspire, and motivate actions to prevent and respond to opioid use, misuse, and addiction. The course materials are designed to be presented as a stand-alone training or integrated into other training programs.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 140	S. Coomey

2171 Introduction to Peer Support Skills and Mental Health Literacy

Maximum Registrants per Local: 2

Students must bring a laptop.

People who have lived through depression, addiction, and suicidal despair often express that connection with peers is incredibly influential in not only bringing them back from the brink but also in giving them hope and reasons for living. Their compassion, ability to listen, and skills in bridging others to resources save lives. Peer support programs provide natural assistance for workplace mental health.
This course is designed to enhance trainers' mental health literacy and peer support expertise with an emphasis on knowledge, skills, and confidence. In this course, students will develop an understanding of the value, fundamentals, and practices of peer support skills. By the end of this course, students will be able to demonstrate a basic knowledge of mental health literacy, find shared meaningful experiences with peers, express empathy through reflections, and demonstrate active listening skills. Students will also be able to assist in connecting people who are struggling to specialty professional services such as crisis counseling and addiction recovery services.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 233	O. Galindo/J. Hock/B.Murphy
2	1:00 pm - 5:05 pm	LA 140	B. Murphy

2172 Advanced Skills in Suicide Prevention Training, Peer Support Skills, and Mental Health Literacy

Prerequisite: 2171 Introduction to Peer Support Skills and Mental Health Literacy

Students must bring a laptop.

The Advanced Skills in Peer Support Skills and Mental Health Literacy is for people who have successfully completed the introductory course (2171) and have the desire to improve their abilities and knowledge to a level where they can train others in basic skills. In both the peer skills developed and mental literacy topics covered, the material is more crisis-focused than the basic listening and support skills in the Introduction course. Participants will gain some basic proficiency in motivational interviewing, crisis response planning, and lethal means safety planning. Mental health literacy topics covered include understanding emotional intensity and how to regulate it and suicide/overdose trauma and grief. They will also have the opportunity to earn a training certificate by completing the 7.5-hour "VitalCog Train-the-Trainer Certification Course." The goals of the 60-minute VitalCog training are to promote critical thinking about suicide prevention, open dialogue about mental health at work, and to promote help-seeking and help-giving behaviors.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 233	O. Galindo/J. Hock

2180 Grooving Fundamentals and Installation

Maximum Registrants per Local: 2

Students must bring a laptop.

In this course, students will learn the proper fundamentals of grooving and installation. Topics include the anatomy of a groove, tool setup procedures, product line, safety testing, and proper installation of grooved piping systems. Students will also be introduced to Revit® software and will have the opportunity to design a grooved piping spool project. A large portion of this course will involve hands-on training including, designing, fabricating, and installing a grooved piping spool project which will be pressure tested.

Personal protective equipment is required. Please refer to the safety requirements.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 101	C. Armstrong/D. Molnar
2	1:00 pm - 5:05 pm	OE 101	C. Armstrong/D. Molnar

3000 Computer Fundamentals for Pipe Trades Instruction

Students must bring a laptop.

This course will introduce students to the basics of computers and Microsoft Windows®. Attendees will learn to produce professional-looking documents using a personal computer, create electronic spread sheets to help prepare budgets, manage numerical information, prepare presentation graphics, and present information. In addition, there will be time at the end of the week to learn about the internet and related topics. Microsoft® Word, Excel, and PowerPoint are the primary software programs taught. Students will be required to fill out a pre-course survey prior to attending the ITP.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 280	N. Marbury
2	1:00 pm - 5:05 pm	BE 280	N. Marbury

3001 Introduction to Teaching Online Using Canvas LMS

Maximum Registrants per Local: 1

Students must bring a laptop.

This course will introduce UA Instructors to the essential tools and features of the Canvas Learning Management System (LMS). It will offer a comprehensive introduction to Canvas course creation and design, featuring step-by-step instructions and practical insights on how to become acquainted with Canvas. This course does not cover LMS migration or Admin skills.

By the end of this course, you will:

- Understand how to create, organize, and manage material in a Canvas course to prioritize student learning and comprehension.
- Begin to identify, organize, and create different types of instructional materials in Canvas, including text, multimedia, and quizzes.
- Identify and use high-quality resources to get appropriate guidance when creating, planning, and teaching in Canvas.

Future Canvas Instructors: If you are new to teaching with Canvas, this course will equip you with the practical knowledge needed to build a course in Canvas.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	TI 241	C. Naegle/V. Iwanski
2	1:00 pm - 5:05 pm	TI 241	C. Naegle/V. Iwanski

ITP Courses

3007 Utilizing UA Technologies in the Classroom

Prerequisite(s): Must have a basic knowledge of Microsoft Office™ and Learning Management Systems (LMS).
Students must bring a laptop.

This course will help prepare your classroom for teaching the next generation workforce. A wide variety of interactive teaching tools will be discussed and demonstrated. Additionally, this course will highlight the latest in virtual reality, augmented reality, and online resources that the International Training Fund has developed. Discussion will be held around transitioning from the traditional classroom to a "smart classroom," utilizing iPads, polling devices, and other electronics to turn your classroom into an interactive learning environment. At the end of this course, students will be more confident using and administering all e-Resources offered by the UA.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 276	V. Burrall/A. Robinson
2	1:00 pm - 5:05 pm	BE 276	V. Burrall/A. Robinson

3025 Autodesk® Revit® MEP

Students must bring a laptop.

Explore the uses of Autodesk® Revit® MEP software as a design, collaboration, coordination, communication, and fabrication tool for the construction industry. Using the latest Autodesk Revit software, students will learn how to utilize a design model for coordination and further develop it into installation drawings and fabrication spool sheets. Additional topics include utilizing point clouds for as-building, building Autodesk Revit families, total station point creation, and useful third-party, add-in software.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GL 106	D. Verna/A. Krzyzanowski
2	1:00 pm - 5:05 pm	GL 106	D. Verna/A. Krzyzanowski
3	8:00 am - 12:05 pm	OE 146	J. French/D. Farmer
4	1:00 pm - 5:05 pm	OE 146	J. French/D. Farmer

3026 Advanced Autodesk® Revit® MEP

Prerequisite(s): 3025 Autodesk® Revit® MEP
Students must bring a laptop.

This course is a continuation of the Autodesk® Revit® MEP course. Utilizing the latest Autodesk Revit software, students will explore the advanced uses of Autodesk Revit MEP as a complete design-to-fabrication VDC/BIM tool for the pipe trades. This hands-on course will expose students to advanced methods of pipe routing. Additionally, students will learn how a coordinated model is processed into installation shop drawings, spool maps, and fabrication spool sheets. Other topics include utilizing schedules for bill-of-materials and reports, building parametric Autodesk Revit families, customizing templates, and other useful third-party, add-in software.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 144	J. Franke/C. Becker
2	1:00 pm - 5:05 pm	OE 144	J. Franke/C. Becker

3029 Revit®Add-Ons

Prerequisite(s): Experienced Revit Users
Students must bring a laptop.

In this course, the experienced Revit user will learn tips and tricks related to the various plugins and add-ons.

- Trimble Sysque
- Victaulic Tools
- GTP Stratus
- M-Suite

Students will gain a better understanding and skill level to utilize these plugins and add-ons. Each software developer expert (vendor) will demonstrate how their software works to enhance Revit to design, fabricate, calculate, spool, and other important functions for piping systems installed on the digital job site. Experienced Revit users will have an opportunity to test drive software, with the Virtual Desktop Infrastructure (VDIs) loaded with the software in a computer classroom where the vendors will lead these workshops in using their software. Students will be able to build a model and produce construction documents for a project using each software's unique toolset.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 005	M. Zimmer/J. Russell
2	1:00 pm - 5:05 pm	GM 005	M. Zimmer/J. Russell

3045 Robotic Total Station (RTS) Layout Basics

Maximum Registrants per Local: 1

Students must bring a laptop.

This course will feature Trimble®, Leica®, and Topcon® Robotic Total Stations. Participants will learn about the basic setup, layout, and quality assurance/quality control with an emphasis on hands-on applications, using the latest software and equipment from each manufacturer. Training will include how to verify surveyed control points and establish building control points to other levels of the structure. Participants will learn how to load model files and points files into the Total Station Tablets for each manufacturer. Course assessments will include a practical, hands-on test, as well as a written test. A passing grade is required to move to the next course toward UA RTS Certification. Course assessments will include a practical, hands-on test, as well as a written test. A passing grade is required to move to the next course toward UA RTS Certification.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 159	A. Tamayo/J. Christensen
2	1:00 pm - 5:05 pm	LA 159	A. Tamayo/J. Christensen

3046 Robotic Total Station (RTS) Beyond Basic

Maximum Registrants per Local: 1

Prerequisite(s): RTS Experience

Students must bring a laptop.

This course will feature Trimble®, Leica®, and Topcon® Robotic Total Stations. Beyond Basics expands from the Basic RTS course by covering vendor software, point creation, and troubleshooting job site pitfalls. Training will include job site simulated pitfalls, point creation from the model, point creation from coordinated points (XYZ), creating and verifying control, collecting points and using the laser for layout (where applicable). Participants will learn how to load models, PDF files, and export files. Participants will learn how using the RTS benefits the Building Information Modeling (BIM) process beyond just point layouts. Course assessments will include a practical, hands-on test as well as a written test, a passing grade is required to move to the next course for UA RTS Certification.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 159	T. Peddy/K. Smith
2	1:00 pm - 5:05 pm	LA 159	T. Peddy/K. Smith

ITP Courses

3047 Robotic Total Station (RTS) Certification

Prerequisite(s): 3046 Robotics Total Station (RTS) Beyond Basic
Students must bring a laptop.

As point layout demand is increasing across construction sites, the UA is establishing a certification in Robotic Total Station. This course is designed to prepare the individual for UA Certification in RTS layout using multiple manufacturers' equipment. This instructor-led advanced workshop will test and increase the knowledge and skill of UA members on robotic total station. Participants will demonstrate and problem-solve troubleshooting techniques and explore best practices in QAQC. UA Member will receive a UA RTS Certification on the final day of class with successful completion of both a written and practical test.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 214	R. Gutierrez/J. Branch

3048 Robotic Total Station (RTS) Train-the-Trainer

Prerequisite(s): 3046 Robotics Total Station (RTS) Beyond Basic
Students must bring a laptop.

Participants who have received the UA RTS Certification will be trained in best practices in training and certifying UA Members on Robotic Total Stations. This course will assist the students in creating a lesson plan and syllabus to meet the requirements of the RTS Quality System Manual. All students will be required to bring a layout plan to be utilized at their training center for UA RTS Certification.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 214	R. Gutierrez/J. Branch

3050 Utilizing Jobsite Technology

Students must bring a laptop.

Participants in this course will receive an introduction to innovative technologies utilized in today's construction sites. We will explore how new equipment and technology are changing project completion processes. This course offers hands-on instruction with this new equipment and technology. Presented innovations include:

- Reality capture cameras
- 3D laser scanners
- Robotic layout systems
- Tool technologies
- Mobile technologies for the jobsite
- Virtual reality eyewear
- Augmented reality
- Mixed reality

By the end of this course, participants will be equipped with the knowledge and skills to adeptly integrate new construction jobsite technology into their apprenticeship training programs.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 223	J. Van Rhyn/B. Baxter
2	1:00 pm - 5:05 pm	LA 223	J. Van Rhyn/B. Baxter

3054 iPad Deployment for Construction Technology Training

Maximum Registrants per Local: 1
Students must bring a laptop.

Mobile Technology is being utilized in construction job sites across North America, and training in this technology to meet the needs of our contractors is critical. This course is designed to provide participants with the knowledge and resources to incorporate iPads into their current training. Through interactive delivery, students will review the fundamentals of mobile data management (MDM) software for managing iPads to facilitate training. Students will be introduced to the Autodesk Construction Cloud (ACC) Build application and gain hands-on experience viewing project models, drawings, and documents on an iPad. Through classroom discussions, students will identify the challenges and benefits of utilizing iPads in their current training and create a lesson plan outlining the steps they can use to implement this technology into their existing curriculum.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 119	G. Maestretti/N. Devine
2	1:00 pm - 5:05 pm	LA 119	G. Maestretti/N. Devine

3055 Mobile Technology for the Construction Industry (2D & 3D Apps)

Students must bring a laptop.

Join our comprehensive course designed for tradespeople looking to enhance their digital skill set in the construction industry. In this class, participants will delve into the world of mobile construction technology with a focus on the following:

- Bluebeam Revu
- Revizto

Learn how to effectively utilize 2D apps and software to markup, collaboration, and document management on the go, and also explore the capabilities of advanced 3D model coordination and collaboration in the field. By the end of this course, you will be equipped with the knowledge and practical skills needed to optimize your construction workflows, improve project communication, and boost productivity using these cutting-edge mobile tools.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 130	C. Hood
2	1:00 pm - 5:05 pm	LA 130	C. Hood

3056 Mobile Technology for the Construction Industry (AI & Other Apps)

Students must bring a laptop.

In this course, students will be introduced to current software technology, Artificial Intelligence (AI), and other applications that further enhance the management of construction processes. Through practice, students will explore the practical application of tablet technology to make jobsites more efficient. Teaching strategies for the classroom will be discussed. Students will be required to use the software tools and generate a new course outline using AI. This is a stand-alone course with no prerequisites.

- Procore
- Field Orderz
- AI

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 017	R. Harlan
2	1:00 pm - 5:05 pm	GM 017	R. Harlan

3095 Utilizing Revit® for UA Training

Students must bring a laptop.

Revit® is used to create an intelligent model that can be used for both system training as well as best installation practices. This course will focus on utilizing Revit® as a training tool. Participants will create

piping systems and projects utilizing Revit. At the end of the class each participant will add these projects to their digital tool boxes and be able to access these models through Autodesk Construction Cloud (ACC) Build application.

Sec	Time	Location	Instructor
2	1:00 pm - 5:05 pm	OE 104	S. Milligan/D. Sunley

4001 Methods in Teaching Water Supply Systems

Students must bring a laptop.

This course is designed for those teaching the installation of water supply systems. It includes historical perspectives on water supply systems, a glossary of terms, water supply pipe materials, fittings, valves, and supports, water sources and water treatment, water distribution systems, building water supply systems, water system sizing, water heating, and water conservation.

Required textbooks or resource materials: *Water Supply Systems (R/17)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 116	J. Quirk/C. Breitlow
2	1:00 pm - 5:05 pm	LA 116	J. Quirk/C. Breitlow

4002 Methods in Teaching Drainage Systems

Students must bring a laptop.

This course is designed for experienced plumbers interested in learning how to teach a course on drainage systems. By the end of this course, students will be able to organize a plan to develop their drainage syllabus and formulate a valid assessment of their students' learning. Using tools from the United Association Online Learning Resourses (UAOLR), Canvas, guest speakers, and real-world materials, students will apply different methods of teaching to design a lesson plan incorporating the subjects of codes, standards, materials, installation methods, fixture connections, storm, vent, and special waste systems.

Required textbooks or resource materials: *Drainage Systems (R/16)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 259	R. Finley/J. Puzzo

4003 Methods in Teaching Plumbing Fixtures

Students must bring a laptop.

This course is meant for the experienced plumber who is well versed in the subject matter of the Plumbing Fixtures and Appliances Manual and now needs to learn how to teach the course. This course content covers the design and function of plumbing fixtures, installation practices, institutional fixtures, fixture controls, appliances, and accessories. Participants will create a plan to develop a Plumbing Fixtures course, including creating a syllabus, lesson plan, and an assessment to use at their local training center. Participants will be able to integrate a variety of teaching methods including the use of UAOLR, PowerPoint presentations, Canvas, fixtures and fixture fittings demonstrations, and shop projects in lesson plans for a Plumbing Fixtures and Appliances course.

Required textbooks or resource materials: *Plumbing Fixtures and Appliances (R/18)*

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 259	R. Finley/J. Puzzo

4004 Plumbing Code Application

Students must bring a laptop.

This course is designed to assist the UA instructor in teaching and developing a plumbing code class. The course will include a brief overview of the history of plumbing code development in the United States and Canada. Comparisons of requirements in the Uniform Plumbing Code, International Plumbing Code, National Standard Code, individual state written codes, and the National Plumbing Codes of Canada pertaining to fixtures, water heaters, water supply, drainage, venting, storm drains, and gas pipes will be discussed. Software tools, such as ExamView®, PowerPoint®, AutoCAD®, and BIM will be demonstrated. Resources on the internet websites of various organizations, such as the UA, IAPMO, ICC, NCC, ASSE, ASPE, PHCC, and MCA will be reviewed. The use of instructional techniques, such as creating assignments and tests, student presentations, and dealing with problems in classroom settings will also be covered in this course.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 310	D. Rademacher/J. Shank/J. Sullivan
2	1:00 pm - 5:05 pm	LA 310	D. Rademacher/J. Shank/J. Sullivan

4005 Installation, Design, and Operation of Copper Piping Systems

Students must bring a laptop.

Copper and copper alloy piping are important materials for the pipe trades. The success of copper piping systems is dependent on proper system design, installation, and operation. This course will provide the instructional tools and information necessary for UA instructors to teach apprentices and journeyworkers how to deliver high-quality copper systems. It will focus on teaching methods for both classroom and shop settings. Experts in the field of copper and copper alloys will discuss and demonstrate procedures for UA instructors to use in delivering training to apprentices and journeyworkers. **Personal protective equipment is required. Please refer to the safety requirements.**

Required textbooks or resource materials: *Soldering and Brazing (R/06)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 148	G. Shimmel/R. Woodard/M. Elmer/H. Moret
2	1:00 pm - 5:05 pm	OE 148	G. Shimmel/R. Woodard/M. Elmer/H. Moret

4006 Methods in Teaching Backflow Prevention Certification

Maximum Registrants per Local: 2

Prerequisite: Backflow Prevention and Assembly Tester Certification

Certification fees apply and are the responsibility of the student. See fee schedule.

Students must bring a laptop.

Participants who wish to be certified as a backflow tester must successfully pass the written and practical exam. They will receive an ASSE 5110 Backflow Tester Certification (recertification).

Guidelines are presented for instruction in acceptable testing practices, annual inspection, and backflow prevention assembly repair for backflow preventers used in cross-connection control programs. Course materials cover topics such as cross-connection identification, reasons for backflow occurrences and the dangers they present, methods of cross-connection control, recommended applications for each type of backflow methods, device or assembly, relevant regulations and codes, and tester liability. The demonstration of several acceptable hands-on testing procedures and the maintenance requirements for various devices and assemblies also will be covered. The minimum requirement for attending this course is to have previously received a nationally recognized Backflow Prevention and Assembly Tester Certification. Attendance will fast-track the application process to become an ASSE-approved instructor or proctor for the

5110 Certification. The course will involve hands-on training. **Personal protective equipment is required. Please refer to the safety requirements.**
Required textbooks or resource materials: *Backflow Prevention Reference Manual, Fourth Edition R/22)*

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	SRB 127	S. Cleary/R. Young

4007 Backflow Repair and Maintenance

Prerequisite(s): 4006 Methods In Teaching Backflow Prevention Certification.
Certification fees apply and are the responsibility of the student. See fee schedule.
Students must bring a laptop.

Participants who wish to be certified as ASSE 5130 Backflow Repairers must receive a passing grade on the written and practical exams.

This course offers intense classroom and practical instruction focused on repairing, troubleshooting, and safety. Attendees will be provided with practical methods for dealing with the repair and maintenance of large-diameter assemblies from various manufacturers. In addition, students are required to test the following backflow assemblies during the class: reduced pressure zone, double check, pressure vacuum breaker, and spill-resistant pressure vacuum breaker. **Personal protective equipment is required. Please refer to the safety requirements.**
Required textbooks or resource materials: *Backflow Prevention Reference Manual, Fourth Edition (R/22)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	SRB 133	J. Kajak/R. Fuess

4009 Methods in Teaching Plumbing Service, Maintenance, and Repair

Maximum Registrants per Local: 1
Certification fees apply and are the responsibility of the student. See fee schedule.
Students must bring a laptop.

Participants who wish to be certified as ASSE 13010 Plumbing Service Technicians must receive a passing grade on the written and practical exams.

This course is intended to assist attendees in their development and presentation of classroom instruction of the UA Plumbing Service, Maintenance, and Repair curriculum. The course will concentrate on hands-on skills training utilizing plumbing service mobile classroom training modules and appropriate tools and equipment. The course emphasizes the customer service and communication skills needed in the plumbing service industry. It will include material referencing plumbing service troubleshooting, repair, installation, sales, business operations, vehicles and equipment, and company policies. Attendance will fast-track the application process to become an ASSE-approved instructor or proctor for the 13010 certification. **Personal protective equipment is required. Please refer to the safety requirements.**
Required textbooks or resource materials: *Plumbing Service, Maintenance, and Repair (ATP) (R/17)*

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	GL 215	R. Abruscati/H. Ibrahim/S. Kaufman/E. Rogers

4011 Medical Gas Instructor

NITC Certification fees apply and are the responsibility of the student. For more detailed information, please review NITC/Certification-Details-6050
Students must bring a laptop.

This course will cover NFPA 99 2024 codes and ASSE Series 6000 standards that govern all aspects of medical gas and medical/surgical vacuum piping systems. This includes requirements for brazer qualification per ASME Section IX. Candidates who successfully pass this course and exam will be certified by NITC as ASSE 6050 Medical Gas Instructors.

Prerequisites:

- Candidates for ASSE 6050 certification shall have a minimum of ten (10) years of documented experience installing plumbing or mechanical piping systems.
- A minimum of two (2) years of documented experience installing medical gas and vacuum systems.
- Instructors shall have a minimum of two (2) years of documented practical teaching experience.
- Instructors shall possess current Medical Gas Systems Installer and Medical Gas Brazer certifications in compliance with ASSE Standard 6010.

Required textbooks or resource materials: *NFPA-99, Health Care Facilities Code, 2024 Edition; NFPA Medical Gas and Vacuum Systems Handbook, 2024 Edition; ASSE 6000 Series Professional Qualifications Standard for Medical Gas Personnel, 2024 edition.*

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	BE 272	G. Beck/V. Stateman
2	8:00 am - 5:05 pm	BE 274	J. Redden/C. Davis

4012 Medical Gas Refresher

NITC Certification fees apply and are the responsibility of the student. For more detailed information, please review NITC/Certification-Details-6050

This course is for current ASSE 6050 to update their credentials.

Students must bring a laptop.

This course is designed to provide the latest updates on the standards governing the installation of medical gas and medical/surgical vacuum piping systems, ensuring that certified medical gas instructors stay current. The content of this course focuses on the notable changes between the NFPA 2021 Code and the NFPA 2024 Code. Following the completion of the course, participants will undergo a proctored online exam. Successfully passing the exam will result in a three-year extension of NITC certification for medical gas instructors.

Required textbooks or resource materials: *NFPA-99, Health Care Facilities Code, 2024 Edition; NFPA Medical Gas and Vacuum Systems Handbook, 2024 Edition; ASSE 6000 Series Professional Qualifications Standard for Medical Gas Personnel, 2024 edition.*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 319	D. Miller/J. Valdivia
2	1:00 pm - 5:05 pm	GM 319	D. Miller/J. Valdivia

4016 Safe Handling and Installation of Fuel Gas Systems

Students must bring a laptop.

This class is designed to teach students the correct and safe methods and techniques to install natural gas piping systems for residential and commercial installations. Class topics of interest and discussion will include sizing, piping methods, and assembly, material, code, safety, and testing. Hands-on demonstrations in class will aid students to become familiar with some of the tools and materials needed to assemble the material safely and properly. Piping systems will be discussed in the following categories: Service Lines, Buried Customer Service Lines, and Inside Service. The only requirement needed for this class is a basic knowledge of plumbing fitting vocabulary to understand drawing and pictures.

Required textbooks or resource materials: *Fuel Gas Systems (R/20)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 356	J. Grimm, Jr./Q. Queer
2	1:00 pm - 5:05 pm	LA 356	J. Grimm, Jr./Q. Queer

ITP Courses

4017 Viega Train the Trainer

Students must bring a laptop.

This course will cover Viega press connection systems being utilized in today's plumbing, mechanical, HVAC, and industrial installations. Included will be Copper Tube Size (CTS) metallic press systems for liquid and gas, Iron Pipe Size (IPS) metallic press systems for liquid and gas, and PEX (cross-linked polyethylene) press and crimp systems for plumbing and mechanical applications. The subject matter will cover technical aspects, typical applications, installation best practices, tooling, and pressure testing of these systems. Also covered will be approvals, codes, and standards governing these systems. The course will also contrast press technology with traditional methods of pipe joining.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 129	R. Maynard/D. Melendy/R. Doherty
2	1:00 pm - 5:05 pm	OE 129	R. Maynard/D. Melendy/R. Doherty

4100 Customer Service for the UA Craftsperson

Students must bring a laptop.

This course is intended to assist participants in developing and presenting classroom instruction in the UA Customer Service Program. Students discuss the requirements for great customer service and will review techniques to implement customer service in their existing curriculum. Participants will be utilizing various learning techniques including role-play, videos, and DISC Personality Profiles along with resources created by MCAA and the UA to assist them within their curriculum.

Required textbooks or resource materials: *MSCA Customer Service Student Workbook & Leaders Guide; Customer Service Skills Flash Cards*

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	GL 103	R. Dee/E. Rogers

4110 Water Conditioning for the Residential/Light Commercial Service Technician

Certification fees apply and are the responsibility of the student. See fee schedule.

Students must bring a laptop.

This course will strengthen your understanding of municipal water while acquiring the necessary skills and technological competency established by ASSE to install and maintain water treatment equipment. The fundamentals of residential and light commercial water aesthetics and the technology available to improve undesirable water issues will be reviewed. Specific topics to be covered will include on-site water aesthetics testing for total dissolved solids, chlorine, iron, and hardness, water conditioning equipment such as ion exchange water softeners, water filtration, and reverse osmosis systems, water aesthetics issues and the effects they can have, private wells, private wells and municipal water supplies, lead and PFAS. Installation, troubleshooting, and maintenance of discussed equipment will also be reviewed. Practical application includes hands-on water testing, applying water conditioning principles, and proving the results of the water conditioning systems. At the end of this course, participants will take the ASSE 22000 certification exam.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	GL 102	T. Hammack/B. Andersen

5005 Pipe Fitting Fundamentals

Maximum Registrants per Local: 2

Students must bring a laptop.

In this course, students will be introduced to IPT's Pipe Trades Handbook and the 12 sections covering Pipe

and Tube Data, Valves and Fittings, Pipe Offsets and Layout, Trigonometry, Prints, Welding, and Rigging. Students will be given shop projects that reinforce each section along with tests and quizzes. Students will be able to use IPT's Handbook to complete shop projects and answer questions associated with them. Students will demonstrate skills to be able to teach this class to their students in their home locals and build a Pipefitter Fundamentals class that fits their local needs.

Required textbooks or resource materials: *IPT Pipe Trades Workbook (spiral-bound)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 318	J. Kaiser/G. McMillen
2	1:00 pm - 5:05 pm	GM 318	J. Kaiser/G. McMillen

5006 General Valve Repair Train-the-Trainer

Prerequisites: Minimum five years UA Journeyworker experience, Current EPRI Valve Repair Certification

Students must bring a laptop.

This course covers methods for teaching the general valve repair class to apprentices and journeyworkers. This course will focus on the UA Valve Repair Program Manual, how to develop course outlines and schedules for the valve repair class, equipment, and tools required, hands-on labs with diagram, gate valves and valve packing, proper recordkeeping, and using Canvas LMS.**Personal protective equipment is required. Please refer to the safety requirements.**

Required textbooks or resource materials: *Valve Repair Program (R/24)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 127	D. Shue/J. Sandman

5007 Advanced Valve Repair Instructor

Prerequisite(s): 5006 General Valve Repair Train-the-Trainer

Must have a Current EPRI Advanced Valve Certification.

Students must bring a laptop.

This course covers methods for teaching the advanced valve repair class to apprentices and journey workers. This course will focus on the UA Valve Repair Program Manual, how to develop course outlines schedules, equipment and tools required, hands-on labs with air-operated and pressure seal valves, proper record keeping, and using Canvas LMS.

Personal protective equipment is required. Please refer to the safety requirements.

Required textbooks or resource materials: *Advanced Valve Repair (R/20)*

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 127	D. Shue/J. Sandman

5009 Industrial Rigging Technologies

Maximum Registrants per Local: 1

Students must bring a laptop and the Pipe Trades Pro Calculator or equivalent.

Participants will be trained in the planning and precautions required when lifting materials and equipment. Students will learn proper and safe rigging of loads, proper applications of slings and rigging hardware, advantages and disadvantages of each piece of rigging gear, uses of rigging hardware, determination/calculations of rigging loads and equipment, proper maintenance of rigging equipment, and rigging personal protective equipment. The industrial rigging and virtual crane signaling training modules will be demonstrated. **Personal protective equipment is required. Please refer to the safety requirements.**

Required textbooks or resource materials: *Rigging (R/24); IPT Crane and Rigging Training Manual (spiral-bound); Signaling (F/25)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 127	M. Howard/B. Massengale/M. McCreary
2	1:00 pm - 5:05 pm	OE 127	M. Howard/B. Massengale/M. McCreary

5011 Industrial Rigging Certification for Instructors

Maximum Registrants per Local: 1

Prerequisite: 5009 Industrial Rigging Technologies

Students must bring a laptop and the Pipe Trades Pro Calculator or equivalent to class.

Students will be provided with theoretical and practical components that cover industry-recognized rigging practices, including calculating centers of gravity, sling stress, and crane setup, as well as the use of tuggers, jacks, and rollers. Instructors' rigging skills will be evaluated by using written and hands-on performance exams. Students are required to perform a sequence of crane lifts using multiple types of rigging equipment. Industrial rigging and crane signaling training modules will be demonstrated and used.

Personal protective equipment is required. Please refer to the safety requirements.

Student requirements before attending this course:

- Review pages 1 to 163 – *IPT Crane and Rigging Training Manual*
- Review *Rigging (R/24)*.

Required textbooks or resource materials: *Rigging (R/24); IPT Crane and Rigging Training Manual (spiral-bound)*

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	LA 340	S. Parsons/S. Wadford/N. Barhight/F. Reece/D. Mulligan/E. Ingles

5012 UA Crane Signal Person Certification for Instructors

Students must bring a laptop.

In this course, students will become qualified signal persons that more than meet the requirements of OSHA CFR 1926 subpart CC. In addition to the standard method of hand signals, voice and new signals will be taught. Working knowledge of the conditions for safe crane operation in various working conditions, dynamics of load movement, electrocution hazards, and hoisting of personnel will be covered. This course will use a combination of animations and videos to illustrate all the standard hand signals, crane characteristics, and crane limitations. Obtaining this certification through written and performance exams will allow these students to become instructors and exam administrators for their home locals.

Required textbooks or resource materials: *Signaling (F/25)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 320	D. Kealey/C. McKnight
2	1:00 pm - 5:05 pm	GM 320	D. Kealey/C. McKnight

5015 Advanced Tube Bending

Students must bring a laptop.

This course begins by covering the parts of a bender, the simple bending process, and the Setback, Advance, Gain (SAG) process. The majority of the course is the study of the SAG method of bending. A general understanding of trigonometry is required, and a review of the fundamentals will be covered in class. Most of the course is devoted to making equal spread offsets and rolling offsets using tube benders. Discussions will take place by applying the learned concepts on the use of the tangent line to solve a variety of piping-related scenarios, such as mitering pipe to make fittings, cutting back a weld elbow to make a fitting less than 90 degrees, and calculating the takeoff of the new fitting. The last portion of this course will be devoted to preparing students to teach at their home locals. All resources such as worksheets and PowerPoint® presentations will be given out to students in digital format.

Personal protective equipment is required. Please refer to the safety requirements.
Required textbooks or resource materials: *Tube Bending (R/13)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 152	K. Gaby
2	1:00 pm - 5:05 pm	LA 152	K. Gaby

5016 Incorporating Pipe Pre-Fabrication Training into Apprenticeship

Students must bring a laptop.

This course is designed to recognize the importance of embracing pipe prefabrication. Participants will be provided information about pipe prefabrication methods and discuss prevailing equipment used throughout the process. The course will describe the curriculum and teaching aids that are utilized in a successful fabrication program. The fabrication program described throughout the course focuses extensively on welding and fitting pipe in a shop prefabrication environment. Methods of training and assessment of apprentices for classroom and hands-on skills will be demonstrated.
Upon course completion, participants will return to their training centers with renewed knowledge and turnkey materials to better prepare apprentices for pipe fabrication in shop and field environments.
Required textbooks or resource materials: *IPT Pipe Trades Workbook (spiral-bound)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 250	M. Stoop/J. Zeeveld
2	1:00 pm - 5:05 pm	LA 250	M. Stoop/J. Zeeveld

5018 Heat Fusion Joining of Thermoplastic Pipe

Maximum Registrants per Local: 1
*Prerequisite: **A 6-hour online** Operator Qualification Training Core for PE Pipe and Operator Qualification Training Core for PP Pipe via McElroy University. Online course fees will be the student's responsibility.*
Students must bring a laptop.

This course offers comprehensive coverage of the theory, practical applications, and methodologies involved in heat fusion techniques for both polyethylene (PE) pipe and fittings, as well as polypropylene (PP) pipe and fittings. Participants will engage in hands-on activities, focusing on mastering the correct fusion procedures for joining PE and PP pipes. Additionally, strategies for tailoring courses to address specific industry requirements at the local level will be explored and recommended.
Upon successful completion of this course, participants will be certified by McElroy University and Aquatherm as trainers in the processes demonstrated through their established guidelines.
Personal protective equipment is required. Please refer to the safety requirements.
Note: This course may not count towards a Washtenaw Community College associate's degree. (See p.12)

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	OE 165	J. Scott

5019 Pipefitting Layout

Maximum Registrants per Local: 1
Students must bring a laptop computer.

In this course, students will be introduced to the 57 1/4 method for the layout of simple and rolling offsets, miters, odd angle fittings, and odd angle laterals, all without using math. Students will be able to lay out nozzles/o-lets on tanks and pipes at exact angles. Students will learn skills to be able to teach this method to their students in their home locals. Students will also be acquainted with the Pipe Trades Pro Calculator and its usefulness in pipefitting layout. A Pipe Trades Pro Calculator as well as all drawing materials and equipment will be supplied.

Personal protective equipment is required. Please refer to the safety requirements.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 163	J. Fogarty/B. Murphy/J. Mitsch
2	1:00 pm - 5:05 pm	OE 163	J. Fogarty/B. Murphy/J. Mitsch

5021 UA/IBEW Instrumentation Calibration Certification Level II

Prerequisite: Current UA/IBEW EPRI Instrumentation Level I Certification

Students must bring a laptop.

In this course, students will explore the process of instrument calibration and prepare to implement an instrument calibration program at their local Training Center. Students will demonstrate calibration and documentation of various devices in a classroom and lab environment. In addition, students will prepare to take the UA/International Brotherhood of Electrical Workers (IBEW) Electrical Power Research Institute (EPRI) Level II Administrator Certification for proctoring of exams at their Training Center.

Required textbooks or resource materials: *Applied Science of Instrumentation (IPT/IBEW) (F/17)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 210	T. Vanderwerf/A. Garwood

5025 Implementing a Gas Distribution Pipeline Training Program

Students must bring a laptop.

In this course, students will review the UA resources and recommended equipment to implement a Gas Distribution Pipeline Training Program at the local. McElroy fusion equipment for manual, hydraulic butt fusion, and sidewall fusion will be demonstrated. In addition, tapping and stopping pipelines under pressure and residential meter set installation will be demonstrated using Mueller Company equipment. **Personal protective equipment is required. Please refer to the safety requirements.**

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 114	R. Musgrove/R. Booth

6000 Teaching HVACR Service Apprenticeship Curriculum

Maximum Registrants per Local: 1

Students must bring a laptop.

This course covers the development and presentation of classroom instruction in the sub-topics relating to the five-year HVACR apprenticeship training program. Students will explore using PowerPoint® as an instructional tools. Students will also learn how to operate software developed for Canvas LMS, customize UA Circuit Builder software, and request, setup, and integrate UA HVACR virtual reality troubleshooting scenarios into their lesson plans.

Required textbooks or resource materials: *HVAC and Refrigeration Systems Training Manual (ATP)(F/14)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 221	K. McDonough/J. Winkler
2	1:00 pm - 5:05 pm	LA 221	K. McDonough/J. Winkler

6001 HVACR Basic Electricity

Maximum Registrants per Local: 1

Students must bring a laptop.

This course provides a review of electrical theory relating to voltage, amperage, and resistance, with

specific emphasis on the safe use of troubleshooting tools on the job. HVACR control circuits will be covered in detail with real-world examples demonstrated. Students will learn how to operate software developed for Canvas LMS, customize UA Circuit Builder software, and request setup, and integrate UA HVACR virtual reality troubleshooting scenarios into their lesson plans.

Required textbooks or resource materials: *Basic Electricity (R/15)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 303	D. Berger/J. Jacob
2	1:00 pm - 5:05 pm	GM 303	D. Berger/J. Jacob

6002 Commercial Refrigeration and Supermarket Applications

Students must bring a laptop.

This course is recommended for UA technicians with HVACR service experience who want to advance their skill set for the ever-changing sector of the supermarket service industry. This course will provide training programs with the resources to effectively incorporate commercial refrigeration training within their local training programs. Topics will include technical education, integrated control strategies, increase in alternative energy and refrigerant applications. Discussion will be presented on safety, new refrigerant technology, refrigerant management, energy management, and controls. Attendees will be taught the operation and purpose of a walk-in freezer and cooler condensing units as well as compressor racks and subsystems including evaporators, display cases, system safety, and operating controls, compressors, oil separators, receivers, three-way valves, service valves, subcoolers, pressure regulating valves, leak detection, and rack system accessories. Additionally, the course will include basic knowledge of analyzing and navigating the relationship between the contractor and supermarket owner. The UA instructor will learn how to teach communication skills that will benefit both the technician and supermarket personnel. This course will allow the UA instructor to integrate these concepts into class for UA craftsmen in their home local to qualify to work on all types of contracts.

Required textbooks or resource materials: *Refrigeration Mechanical Equipment Service Manual (R/14)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 350	D. Tackett/K. Wadley

6006 Teaching Hydronic Heating and Cooling Systems

Students must bring a laptop.

In this course, students will review the principles of hydronics heating and cooling. Topics include equipment, design, operation, control and installation methods. Maintenance and troubleshooting techniques will also be reviewed. Participants will also review instructional resources, methods and materials for teaching an effective hydronics course at the local level.

Required textbooks or resource materials: *Hydronic Heating and Cooling (R/15)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 311	D. Worth/A. Kollar
2	1:00 pm - 5:05 pm	GM 311	D. Worth/A. Kollar

6007 Principles of Training on Carbon Dioxide (R744) Refrigeration Systems

Students must bring a laptop.

This course is designed to demonstrate and explain how best to teach carbon dioxide (CO_2) refrigeration systems. Participants will be provided with the latest technology, information, materials, and resources necessary to deliver a program on the use of R744 in refrigeration systems. The safety, tools, and equipment required to practice in the (CO_2) industry will be demonstrated.

Personal protective equipment is required. Please refer to the safety requirements.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	BE 140	D. Tackett/K. Wadley

6008 Delivering a Building Automation Program in HVACR

Students must bring a laptop.

The objective of this course is to provide the UA HVACR instructor with the knowledge and tools to deliver a building automation program. Train-the-trainer methodology and techniques will be used to prepare the participant to develop their local program. An overview of building automation systems (BAS), applications, direct digital control (DDC) systems, and the major components presently used to control HVACR equipment will be covered. Energy conservation, control strategies, and the human interfaces will be studied, as well as maintenance of systems. BAS practical trainers will be presented and demonstrated by participants in lab sessions to assist instructors with the development of the practical learning environment. **Personal protective equipment is required. Please refer to the safety requirements.**

Required textbooks or resource materials: *Building Controls (R/13)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 150	T. McQuiston/M. Barnes
2	1:00 pm - 5:05 pm	BE 150	T. McQuiston/M. Barnes

6009 Methods in Teaching Start, Test, & Balance

Students must bring a laptop.

Note: *This course is a prerequisite for the CA Title 24 Acceptance Test Technician Certification.*

This course is designed to equip students with presentations, resources, and hands-on demonstrations, and evaluation exercises to conduct HVACR start, test, and balance training. Emphasis is on practical skills and applied theory necessary for teaching a basic course in air and water balancing. The principles of heat transfer and fluid flow, as related to hydronic balancing and system performance, as well as electrical testing and measurement, will be covered. The application and operation of system components, such as fans, pumps, duct systems, and hydronic piping systems will be detailed. Classroom examples will be demonstrated on operating air and hydronic components. Fluid flows will be calculated and then measured on these systems. One class session will be held in a mechanical room to allow students to experience a hands-on startup and balance of both an air and hydronic distribution system. **Personal protective equipment is required. Please refer to the safety requirements.**

Required textbooks or resource materials: *Start, Test, and Balance (R/18)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GL 112	E. Engel/B. Cutler

6012 Variable Refrigerant Flow (VRF) - The CITY MULTI Service Course (Mitsubishi)

Students must bring a laptop.

This is an introductory-level course on a VRF system. Topics covered will include Mitsubishi City Multi VRF product overview, Diamond System Builder, review refrigerant piping & 410A refrigerant, VRF technology, review system installation procedures, City Multi controls wiring & communications, addressing, review commissioning procedures.

Required textbooks or resource materials: *Mitsubishi CITY MULTI Service Course Book*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	HL 105	M. Kardos/J. Newbro
2	1:00 pm - 5:05 pm	HL 105	M. Kardos/J. Newbro

6015 Introduction to Oil-Less/Magnetic Bearing Centrifugal Turbocor Compressors

Students must bring a laptop.

In this course students will be introduced to magnetic bearing technology for Turbocor HVAC compressors. Topics include compressor history, theory of operation, components, and operation. Monitoring software will be introduced including the download, install, and utilization of that software. Participants will receive an overview of primarily Danfoss Turbocor equipment, but other magnetic bearing compressors may also be discussed. Instructional materials will be provided for use at the local. At the completion of this course, students will take the Danfoss Turbocor Compressor assessment for a certificate.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 156	D. Sommise/C. Ohlde
2	1:00 pm - 5:05 pm	LA 156	D. Sommise/C. Ohlde

6016 Fundamentals of Variable Frequency Drive

Maximum Registrants per Local: 2

Students must bring a laptop.

In this course, students will identify and review variable frequency drive (VFD) operation and components. A hands-on lab will allow students to check, test, and complete factory startups on various manufacturers of VFDs. Students will be introduced to UA material pertaining to VFDs to develop their own VFD class at their home local.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 126	M. Clinedinst/S. Tryon
2	1:00 pm - 5:05 pm	LA 126	M. Clinedinst/S. Tryon

6017 Pump Installation Service and Maintenance

Students must bring a laptop.

In this course, students will be introduced to pump service, installation, and maintenance techniques. Upon completion of the class, the students will be able to describe what a pump is and its basic function, articulate major pump classifications, and compare and contrast operational theory with common applications. They will define best practices for pump installation in a system as well as explain the fundamentals of pump performance and measurement. Through hands-on lab work, they will demonstrate familiarity with pump components and methods to service and repair pumps.

Required textbooks or resource materials: *Pumps (R/00)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 121	C. McHugh/M. Grande
2	1:00 pm - 5:05 pm	OE 121	C. McHugh/M. Grande

6022 Comprehensive Management of Refrigerants, Regulations, and Safety Issues Under EPA Section 608

Students must bring a laptop.

An HVACR technician is exposed to many personal safety hazards during a normal workday. The risks associated with the use of refrigerants in refrigeration and air-conditioning equipment can include toxicity, flammability, asphyxiation, and physical hazards. Although refrigerants can pose one or more of these risks, system design, engineering controls, and other techniques mitigate this risk for the use of refrigerant in various types of equipment. This course provides UA instructors with the information and resources needed to create, or supplement, a course at the local that will effectively prepare apprentices for the EPA Section 608 certification examination. This certification examination changed in 2018, so the information provided in this course differs greatly

from that on which the industry relied for earlier examination versions. In addition to certification-specific content, this course will explore safe refrigerant handling and management for the air conditioning and refrigeration markets served by all UA locals. Other discussion topics include but are not limited to: ASHRAE Standards 15 and 34, EPA Significant New Alternatives Policy (SNAP) updates, refrigerant numbering, refrigerant classifications, and refrigerant myth-busting.

Please Note: This is **NOT** the A2L (Low GWP) refrigerant course. The A2L course is *6059 Safe Handling of Mildly Flammable Refrigerants (A2L).*

Required textbooks or resource materials: *Conservation and Safe Handling of Refrigerants (R/19)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 205	E. Silberstein

6028 HVACR Flow Measurements and Concepts

Students must bring a laptop.

This course is intended for students to facilitate classes on performance testing, that is, the measurement and analysis of data such as airflow, water flow, refrigerant flow, and electrical power input. Participants will perform practical exercises on operating equipment training modules and/or modules and/or functional building systems and/or trailer equipment. The initial session will include a recap of fundamental training modules, such as the fundamental basis for determining airside total heat differential from wet bulb readings, measuring air velocity and calculating CFM, determining airside pressure drop as compared to design, measuring and plotting a fan curve, and comparing horsepower approximations with specifications. The course will also examine the fundamental basis for determining water flow (GPM) via circuit balancing valves and/or determining waterside pressure drop, as compared to designing, measuring, and plotting a pump curve and comparing horsepower approximations with specifications. Apparent power input evaluation will be included, such as measuring voltage and current inputs, approximating and comparing to the nameplate, evaluating imbalances, etc.

Required textbooks or resource materials: *Start, Test, and Balance (R/18)*

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	GL 112	E. Engel/B. Cutler

6059 Safe Handling of Mildly Flammable Refrigerants (A2L)

Students must bring a laptop.

The transition to low-GWP refrigerants for residential and commercial comfort cooling and commercial refrigeration will include alternatives that are mildly flammable, highly flammable, and have a higher toxicity than those used today. Refrigerant flammability creates novel challenges for the delivery chain never before evaluated and addressed as a whole. This course will offer the latest training on emerging low-GWP refrigerants.

Required textbooks or resource materials: *Low GWP Refrigerant Safety: Flammable and Mildly Flammable Refrigerants (Esco)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 133	M. Schmidt/J. Obrzut/C. Dziwak
2	1:00 pm - 5:05 pm	OE 133	M. Schmidt/J. Obrzut/C. Dziwak

6061 Troubleshooting Residential HVACR Systems

Maximum Registrants per Local: 1

Students must bring a laptop.

Participants will receive training related to residential HVACR systems and service utilizing a combination of instructional methods, including a variety of HVACR trainers and HVACR tools in the lab. Attendees will

learn installation, startup, commissioning, and troubleshooting of residential split systems. Additionally, techniques will be demonstrated by Appion, Fluke, and iManifold as it relates to calculating and quantifying energy performance of residential split systems. **Personal protective equipment is required. Please refer to the safety requirements.**

Required textbooks or resource materials: *HVAC and Refrigeration Systems Training Manual, (ATP) (F/14)*

Sec	Time	Location	Instructor
2	1:00 pm - 5:05 pm	GM 015	L. Rice/C. Ponton

6063 Commercial and Residential Boiler Service

Students must bring a laptop.

Participants will obtain fundamental knowledge on the design of standard boilers with an emphasis on high efficiency condensing boiler systems, including multi-temp with radiant heat exchanger design, zoning with pumps and/or valves, heat exchanger design, expansion tank sizing, combustion theory, water chemistry, and boiler controls. Additionally, advanced knowledge of multiple boiler system designs including hybrid systems, venting, load matching demands, startup and combustions, boiler/system controls, and connectivity will be offered. Steam and hot water boiler safety will be demonstrated.

Required textbooks or resource materials: *Lessons Learned Servicing Boilers: Things to Know When Maintaining Boilers (Volume 3) by Ray Wohlfarth; Combustion Analysis and Fuel Efficiency; Low Pressure Boilers, 5th Edition, (ATP, 2018)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	TI 125	B. Tisdale/J. Schley
2	1:00 pm - 5:05 pm	TI 125	B. Tisdale/J. Schley

6068 Critical Thinking for the Service Technician

Students must bring a laptop.

This comprehensive, hands-on course is designed to enhance critical thinking and problem-solving skills in HVACR system troubleshooting. The course covers key concepts such as system components, real-world issues, the application of math and science principles, and the use of the scientific method in diagnosing problems. Participants will learn to recognize cognitive biases, integrate mathematical calculations and scientific principles, and use critical thinking strategies to troubleshoot HVACR systems effectively. The course also incorporates practical exercises, case studies, and interactive group activities, providing valuable tools and techniques for educators to engage students and enhance learning. By the end of the course, attendees will have a deeper understanding of HVACR systems and the critical thinking tools necessary for successful troubleshooting and teaching.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 305	D. Bryant
2	1:00 pm - 5:05 pm	GM 305	D. Bryant

7000 Fire Protection Technology Class for Sprinkler Fitters

Students must bring a laptop.

In today's world, technology is changing at a rapid pace. In this course, the UA journeyworker will learn about the latest technologies available for fire protection for industrial, commercial, and residential use. The technologies presented will range from system components to new fire protection systems, including their installation methods.

- Veiga - Approvals for Fire Protection

- Industry Tools
- FARS - Firefighter Air Rescue
- Hose Monster
- NFPA LiNK

Design, engineering, and software that have an impact on the fire protection industry also will be covered.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 335	C. Ketner
2	1:00 pm - 5:05 pm	LA 335	C. Ketner
3	8:00 am - 12:05 pm	LA 337	M. MacDonnell
4	1:00 pm - 5:05 pm	LA 337	M. MacDonnell

7004 Inert Gas System Training

Students must bring laptop.

In this course students will learn the installation process, design guidelines, and detailed information on how inert gas systems function and operate. Students will gain knowledge and understanding of the science behind the system, along with proper installation and testing methods. Inspection, Testing, and Maintenance (ITM) for Inert Gas Systems will be covered, including placing the system in maintenance mode for servicing. The requirements for NFPA 2001 will also be reviewed and discussed along with Fire Suppression System Association Guides.

Required textbooks or resource materials: *NFPA 2001*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	HL 106	D. Miles/J. Thompson/S. Miller
2	1:00 pm - 5:05 pm	HL 106	D. Miles/J. Thompson/S. Miller

7024 Developing Fire Protection Curriculum Using 3D Technology

Students must bring a laptop.

This course will give students the ability to create piping models using design authoring software such as Autodesk Revit®. These models will be able to be used for instructional lessons for instructional courses at their home locals. This is an opportunity to integrate technology into an existing class. At the end of this course, students will be able to design projects with the software, prepare plans, isometric and elevations drawings as well as annotate those drawings and create PDF formats of these drawings. Students are to bring a drawing, sketch, or idea of a piping system or scenario that will be utilized in the classroom.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	TI 244	A. Johnston/R. Rickert
2	1:00 pm - 5:05 pm	TI 244	A. Johnston/R. Rickert

7032 Reliable Automatic Fire Sprinkler Valve Training

Students must bring a laptop.

This class will inform the participants of the history of Reliable Automatic Sprinkler Company and increase their working knowledge of the installation, troubleshooting, repair and operations of all the automatic fire sprinkler valves and all of its components. They will develop the essential skills to train UA apprentices and journey workers in these subjects. The class will include facilitator guides and learner manuals for those who successfully complete the course.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 135	A. Merino/C. McElroy
2	1:00 pm - 5:05 pm	OE 135	K. Convy/C. McElroy

7041 Fire Pump Inspection and Testing

Students must bring a laptop.

This course is designed to provide teaching methods, working knowledge, and skills to UA instructors on understanding proper installation, Inspection, and testing of the various types of fire pumps. The course includes a practical, hands-on workshop where the participants will inspect, test, and troubleshoot problems, make necessary recommendations, and adjustments, and perform a pump test.
The code requirements per NFPA 20 and NFPA 25 for installation, inspection, and testing for fire pumps along with requirements for proper PPE per NFPA 70E will also be addressed along with a fire with a fire pump test where participants will plot and analyze pump curves. Participants will be shown a V-Tek pump alignment trainer and laser tool to simulate the correct procedures for shaft alignment for fire pumps. **Personal protective equipment is required. Please refer to the safety requirements.**

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 154	J. Franks/F. Usher

7042 Fire Pump Installation, Repair, and Maintenance

Students must bring a laptop.

This course provides teaching methods, working knowledge, and skills to UA instructors on understanding the proper installation, maintenance, and repair of the various types of Aurora and Alis-Chalmers fire pumps. Hands-on activities include disassembling, detecting, and troubleshooting problems, then making necessary repairs and reassembling. Code requirements per NFPA 20 and NFPA 25 for installation, repair, and maintenance of fire pumps along with requirements for proper PPE per NFPA 70E will also be addressed.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	OE 154	J. Franks/F. Usher

7060 Understanding Fire Alarm Panels and Initiating Devices of Fire Protection Systems

Students must bring a laptop.

Participants in this course will learn about the operation and testing of some fire alarm panels and how the information on panels relates to the initiating devices. Participants will learn about the different types of initiating devices, and how they operate, function, and communicate with the alarm panels. The multi-meter and its function will be introduced, along with proper steps and safety while using it to troubleshoot the electrical initiating devices. The course includes a hands-on workshop where the participants will demonstrate the basic operation of alarm panels, including testing and resting each panel, and detecting and troubleshooting problems on the initiating devices that are part of the fire protection system. **Personal protective equipment is required. Please refer to the safety requirements.**
Required textbooks or resource materials: *Basic Electricity (R/15)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 109	J. Holmes/B. Hopping
2	1:00 pm - 5:05 pm	OE 109	J. Holmes/B. Hopping

8000 Administration of a United Association Weld Test

Students must bring a laptop.

Explore the processes involved with the testing of welders in accordance with the UA Welder Certification Program. Participants will be able to perform the duties and responsibilities of an authorized testing representative (ATR) as defined in the welder certification program that includes the administration

of a welder testing event, required documentation, and determining the acceptability of weld test assemblies during in-process and final inspections.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	GM 321	M. Ruggles/J. Fridley
2	1:00 pm - 5:05 pm	GM 321	M. Ruggles/J. Fridley
3	8:00 am - 12:05 pm	GM 325	N. Brown/D. Kosinski
4	1:00 pm - 5:05 pm	GM 325	N. Brown/D. Kosinski

8002 Arc Welding Practical Fundamentals and Theory

Students must bring a laptop.

UA instructors will gain knowledge in arc welding techniques and practical applications used to develop welder training programs specific to our industry. Instructors will see the importance of visual training aids while teaching a hands-on course. Topics covered will include the different welding processes, basic metallurgy, electrode classifications, F numbers, shielding gases, welding theory, welding safety, process selection, consumable selection, and handling. This is not a shop class; no actual welding will be performed.

Required textbooks or resource materials: *Welding Practices and Procedures for the Pipe Trades (ATP) (F/16)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 158	J. Blondin/J. Ross
2	1:00 pm - 5:05 pm	LA 158	J. Blondin/J. Ross

8003 Applied Metallurgy

Students must bring a laptop.

In this course, students will review the properties and characteristics of metals commonly used in the pipe trades. Students will learn the nature of ferrous and non-ferrous metals, both in raw and manufactured forms. There also will be an emphasis on the physical and mechanical properties of common metals, and the processes used to create desired changes.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 131	P. Rufe
2	1:00 pm - 5:05 pm	OE 131	P. Rufe

8004 Piping Codes for Industrial Work

Students must bring a laptop.

In this course, students will identify piping codes and the properties of metals. Topics will include the history of codes, piping metallurgy, material selection, installation, and welding requirements. They will also review procedures for testing, inspection, and stamping, per the American Society for Mechanical Engineers (ASME) B31.1 and B31.3 codes. In addition, students will demonstrate the fundamentals and standards for materials, design of expansion loops, cold springing, and design specification control through classroom and hands-on applications.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 357	R. Thein/L. Wickland

8006 Innovative Welding Techniques

Prerequisite: A current Shielded Metal Arc Welding (SMAW) or Gas Tungsten Arc Welding (GTAW) UA Welder Certification

Students must bring a laptop.

This course is specifically designed for students who are seeking to improve their pipe welding skills by utilizing the SMAW and GTAW welding processes. Students will be shown tried-and-true welding techniques by highly experienced UA welding instructors. All enrolling students should possess the welding skills in the major processes before they choose to enroll in the course. Individuals taking this course should bring three or more personal welding techniques they may use in the SMAW and GTAW processes. These topics will be used for discussion points and demonstrations. Students must bring their own welding hood, welding jacket, and welding gloves. **Personal protective equipment is required. Please refer to the safety requirements**.
Required textbooks or resource materials:

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 125	P. Larou/E. Sanchez/N. Schneider
2	1:00 pm - 5:05 pm	OE 125	P. Larou/E. Sanchez/N. Schneider

8010 Methods of Teaching Downhill Welding

Prerequisite: Must hold a current UA-1 Weld Test Certification
Students must bring a laptop.

Understand the technique of downhill welding for teaching apprentices and journeyworkers. The welding instruction will be given on large-diameter pipe. Classroom instruction on how and what to teach will be presented. This course will include joint preparation, lineup of coupons, and hands-on welding. Students must bring their own welding hood, welding jacket, and welding gloves. **Personal protective equipment is required. Please refer to the safety requirements.**
Required textbooks or resource materials:

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	SRB 126	F. Hollabaugh/T. Luszczynski/P. Kadlec
2	1:00 pm - 5:05 pm	SRB 126	F. Hollabaugh/T. Luszczynski/P. Kadlec

8012 Methods in Teaching Shielded Metal Arc Welding (SMAW)

Prerequisite: Current Shielded Metal Arc Welding (SMAW) UA Welder Certification
Students must bring a laptop.

This course covers advanced pipe welding techniques used in applications such as welding alloy materials and process piping. The course focuses on how to teach advanced techniques of shielded metal arc welding and the process variables for a variety of materials. This course provides local unions a means of preparing their members in developing the skills necessary to address the industry's welding needs. Students must bring their own welding hood, welding jacket, and welding gloves. **Personal protective equipment is required. Please refer to the safety requirements**.
Required textbooks or resource materials: *Welding Practices and Procedures for the Pipe Trades (ATP) (F/16)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 156	J. Neu/D. Muntz
2	1:00 pm - 5:05 pm	OE 156	J. Neu/D. Muntz

8013 Methods in Teaching Gas Metal Arc Welding (GMAW)

Prerequisite: Current Gas Metal Arc Welding (GMAW) UA Welder Certification
Students must bring a laptop.

In this course, this course, students will learn about methods of teaching the techniques of Gas Metal Arc Welding (GMAW). Safety, set-up, and minor maintenance and repair of GMAW equipment, selection of project consumables, selection of the proper gases, and troubleshooting techniques will be emphasized. Hands-on welding instruction demonstrations will be given on carbon steel and stainless steel pipe in multiple positions. Specialized applications utilizing the current technology of flux core, metal core, aluminum,

stainless, and pulse MIG will also be presented and discussed.
Required textbooks or resource materials: *Welding Practices and Procedures for the Pipe Trades (ATP) (F/16)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 123	A. Caron/D. Lavoie/P. Fitzgerald
2	1:00 pm - 5:05 pm	OE 123	A. Caron/D. Lavoie/P. Fitzgerald

8014 Methods in Teaching Advanced Gas Tungsten Arc Welding (GTAW)

Prerequisite: Current Gas Tungsten Arc Welding (GTAW) UA Welder Certification
Students must bring a laptop.

This course covers advanced pipe welding techniques used in applications such as welding alloy materials and process piping. The course focuses on how to teach advanced techniques of gas tungsten arc welding process variables for a variety of materials. This course provides local unions a means of preparing their in developing the skills necessary to address the industry's welding needs. Students must bring their own welding hood, welding jacket, and welding gloves. **Personal protective equipment is required. Please refer to the safety requirements.**
Required textbooks or resource materials: *Welding: Practices and Procedures for the Pipe Trades (ATP) (F/16)*

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	OE 120	J. Reagan/Z. Brawner
2	1:00 pm - 5:05 pm	OE 120	J. Reagan/Z. Brawner

8015 ASME Section IX Welding Code

Students must bring a laptop.

This course is designed to provide participants with an understanding of welding procedure specifications and welder qualifications in accordance with Section IX of the ASME Code. Participants will be able to apply the rules of Section IX as they pertain to the development of welding procedure specifications and the qualification of welders.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 237	C. Schultz/R. Casertano
2	1:00 pm - 5:05 pm	LA 237	C. Schultz/R. Casertano

8016 TIP TIG® Welding Process

Prerequisite(s): Current Gas Tungsten Arc Welding (GTAW) UA Welder Certification and a minimum of five years of experience with the GTAW and GMAW welding processes.
Students must bring a laptop

The course provides a detailed understanding of the TIP TIG® (GTAW) hot wire welding process. The TIG manual welding process allows for substantial increases in filler metal deposition while maintaining superior GTAW weld quality. This course covers the safety, operation, technology, and equipment setup associated with this type of advanced welding system. In addition, the course covers process variables, system control functions, and weld parameter selection for a variety of materials. Students must bring their own welding hood, welding jacket, and welding gloves. **Personal protective equipment is required. Please refer to the safety requirements.**

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 254	P. Disque/D. Marland
2	1:00 pm - 5:05 pm	LA 254	P. Disque/D. Marland

8040 Quality Control Management

Students must bring a laptop.

In this course, students will identify the quality control requirements of the American Society of Mechanical Engineers (ASME), the National Board of Boiler and Pressure Vessel Inspectors (NBBI), and the American Welding Society (AWS) as they apply to pressure piping systems and equipment. Students will identify and demonstrate the proper documentation of quality control programs and verification of code compliance in the inspection process. The course is designed for AWS Certified Welding Inspectors (CWIs) and individuals with previous fabrication inspection experience. The course instructors are UA members with many years of experience working as quality control managers in the piping industry. The United Association believes that having a UA-trained quality control inspector on staff brings both quality and financial savings to the employing contractor and customer alike.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 357	R. Thein/L. Wickland

8047 Semiconductor Orbital Tube Welding

Prerequisite(s): Current UA 14, 38, 41, 18A or 19A

Students must bring a laptop.

This 40-hour instructor's course is intended to provide each participant with the techniques and material needed to instruct the orbital fusion welding (no filler wire) course as used in semiconductor, pharmaceutical, biotechnology, and food processing plants. This course is designed for UA instructors with a TIG welding background and must have either a current UA 14, 38, 41, or equivalent certification that requires a backing purge or Orbital Tube certification equivalent to the UA 18A or 19A.

Required textbooks or resource materials: *Course 8047 Binder*

Sec	Time	Location	Instructor
1	8:00 am - 5:05 pm	GL 104	D. Bliven/J. Hodell
2	8:00 am - 5:05 pm	GL 104	J. Morriss/J. Salazar

9001 Apprenticeship Standards Guidelines

Students must bring a laptop.

Students must bring a copy of their local union apprenticeship standards.

This course is designed to provide new training directors, coordinators, or JATC members with an in-depth look at apprenticeship standards, and how they can affect the operation of the program. Discussions will be held on the United Association National Guideline Standards, developed by the International Pipe Trades Joint Training Committee, Inc., as well as on the regulations put into place by the U.S. Department Labor under 29 CFR 29 - Labor Standards for Apprenticeship Programs and 29 CFR 30 - Employment of Opportunity in Apprenticeship. Part of this course will involve group discussions on your local standards and how they can be different for State and Federal registration agencies.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 311	A. Swoope/E. Ortega/B. Peabody
2	1:00 pm - 5:05 pm	LA 311	A. Swoope/E. Ortega/B. Peabody

9002 Administration of a Jointly Managed Training Program

Students must bring a laptop.

In this course students will receive updated UA jointly managed training program information and best practices for running that program successfully. Students will collaborate using problem solving techniques to determine best practices used to comply with laws affecting training programs, write policies to support

standards of apprenticeship, develop curriculum coordinated with on-the-job learning, maintain accreditation, and administer a training program.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 224	J. Cooper/M. Taylor
2	1:00 pm - 5:05 pm	LA 224	J. Cooper/M. Taylor

9003 Understanding Legal Issues and Fiduciary Responsibilities

Students must bring a laptop.

Everyone associated with the operation of a jointly managed training program should be aware of the legal issues and fiduciary responsibilities that exist. Participants in this course will receive information on statutory and regulatory compliance related to operating a training program. Discussion will be held on documents, prohibitive transactions, and legal documentation procedures, and will include conducting JATC meetings. Additionally, there will be discussion on the common pitfalls associated with various drug testing and fitness testing, as well as the different insurance requirements of a JATC (liability, workers comp, etc.).

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 229	B. Matthews/J. Smith
2	1:00 pm - 5:05 pm	LA 229	B. Matthews/J. Smith

9004 Managing Financial Operations of a Training Program

Students must bring a laptop.

Jointly managed apprenticeship programs operate year-round and have a wide variety of financial obligations. This course is designed to provide individuals who have JATC financial responsibilities with information on how to make sound financial decisions. Participants in this course will benefit from discussions on a variety of financial topics including investments, accounting principles, preparation of yearly budgets, financial reporting requirements, accounting for instructor or trustee expenses, introduction to accounting systems, and preventing and detecting financial fraud. Additionally, there will be discussion on the different types of financial investments available, the need to establish investment policies, and factors to consider when making investments. This course also will include important items to consider when facing potential U.S. Department of Labor (DOL) audits.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 227	D. Defew/M. Majszak
2	1:00 pm - 5:05 pm	LA 227	D. Defew/M. Majszak

9006 Addressing Barriers to Apprentice Success

Students must bring a laptop.

This course covers best practices for handling common problems that affect apprentices and prevent their successful completion of a local joint training program. Issues such as substance abuse, harassment, and emotional problems, to name just a few, will be examined. Participants will develop communication skills and will learn apprentice success strategies that will assist them with decreasing resistance from certain students, ultimately motivating them to achieve their full potential.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 111	B. Spitsbergen

9009 Internal and External Communication

Students must bring a laptop.

Every day UA training directors and coordinators are challenged with communication from many internal

and external sources. How does one prioritize the relevance and urgency of the latest phone call, email, or request? Learn how to communicate effectively and efficiently with your business managers, agents JATC committee, instructors, and the local stakeholders on the vitality and relevance of your local training initiatives. Strategies will be presented on creating language for operative messaging to all bodies asking or waiting for information from your office. All participants will need to bring a laptop to participate in the working sessions of this course.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	BE 174	A. Hopper/C. Birk

9017 After the Fight: Welcoming Our Heroes to the UA

Students must bring a laptop.

Welcoming our heroes home involves more than just gratitude; it requires a comprehensive support system to address their diverse needs and recognize their invaluable contributions to the piping industry. This course will enable students to return to their local with the tools to build that support system for veteran members and an understanding of the contributions they bring to the table. Several topics will be addressed including healthcare, education, employment, and mental health support, along with the services offered to veterans to ensure they can transition smoothly into civilian life and continue to thrive. By understanding the different types of veterans and the unique advantages they can bring to the construction industry, we can better appreciate and support these remarkable individuals who have dedicated their lives to serving our country.

Sec	Time	Location	Instructor
1	1:00 pm - 5:05 pm	LA 343	M. Parker

9105 UA Canada Training Director/Coordinator Program

Students must bring a laptop

This training program is designed to equip Canadian Training Directors with the latest resources available to them. We will navigate multiple collaboration strategies using the latest innovative solutions and infrastructure while engaging in specialized training as determined from the input of Training Directors across Canada. All curriculum and supplies will be provided for those attending this program.

Sec	Time	Location	Instructor
1	8:00 am - 12:05 pm	LA 341	M. Gordon/R. McPherson

Required Text Materials for Classroom Use

The following items will be available from the IPTJTC Bookstore. Please note that many courses require the use of UA Online Learning Resources. If you do not currently have access, please visit www.uaolr.org to request an account.

COURSE # / TITLE		REQUIRED MATERIAL
2001	Methods in Teaching Pipe Trades Applied Mathematics	*Related Mathematics (R/23), Piping Handbook and Offset Formulas*
2003	Methods in Teaching Related Science	*Related Science (R/22)*
2004	Methods in Teaching Drawing Interpretation and Plan Reading	*Drawing Interpretation and Plan Reading (R/00)*
2006	Basic Electricity	*Basic Electricity (R/15)*
2008	Labor History and the UA Part One: 1800s to 1920s	*The Rise of the United Association (Segal); Labor in America, 9th Edition (Dubofsky/McCartin)*
2009	Labor History and the UA Part Two: 1920 to the Present	*The United Association 1924 - 1989 (Griffith); Labor in America, 9th Edition (Dubofsky/McCartin)*
2012	UA/MCAA Foreman Certification	*UA Foreman Training Manual (U/22)*
2095	Advanced Plan Reading	*Advanced Plan Reading and Related Drawing (R/22)*
2100	Adapting Apprenticeship to Today's Student	*Not Everyone Gets a Trophy: How to Manage Millennials (Tulgan); Managing Generation Z: How to Recruit, Onboard, Develop, and Retain the Newest Generation in the Workplace (Paggi & Clowes)*
4001	Methods in Teaching Water Supply Systems	*Water Supply Systems (R/17)*
4002	Methods in Teaching Drainage Systems	*Drainage Systems (R/16)*
4003	Methods in Teaching Plumbing Fixtures	*Plumbing Fixtures and Appliances (R/18)*
4005	Copper Piping Systems, Advanced Installations, Specialized Design and Safe Operation	*Soldering and Brazing (R/06)*
4006	Methods in Teaching Backflow Prevention Certification	*Backflow Prevention Reference Manual, Fourth Edition (R/22)*
4007	Backflow Repair and Maintenance	*Backflow Prevention Reference Manual, Fourth Edition (R/22)*
4009	Methods in Teaching Plumbing Service, Maintenance, and Repair	*Plumbing Service, Maintenance, and Repair (ATP) (R/17);*
4011	Medical Gas Instructor 6050	*NFPA-99, Health Care Facilities Code, 2024 Edition; NFPA Medical Gas and Vacuum Systems Handbook, 2024 Edition; ASSE 6000 Series Professional Qualifications Standard for Medical Gas Personnel, 2024 Edition*
4012	Medical Gas Refresher	*NFPA-99, Health Care Facilities Code, 2024 Edition; NFPA Medical Gas and Vacuum Systems Handbook, 2024 Edition; ASSE 6000 Series Professional Qualifications Standard for Medical Gas Personnel, 2024 Edition*
4016	Methods in Teaching Fuel Gas Systems	*Fuel Gas Systems (R/20)*
4100	Customer Service for the UA Craftsperson	*MSCA Customer Service Student Workbook and Leaders Guide; Customer Service Skills Flash Cards*
5005	Pipe Fitting Fundamentals	*IPT Pipe Trades Training Manual (spiral-bound)*
5006	General Valve Repair Train-the-Trainer	*Valve Repair Program (R/24)*
5007	Advanced Valve Repair Instructor	*Advanced Valve Repair (R/20)*
5009	Industrial Rigging Technologies	*Rigging (R/24); IPT Crane and Rigging Training Manual (spiral-bound); Signaling (F/25)*
5011	Industrial Rigging Certification for Instructors	*Rigging (R/24); IPT Crane and Rigging Training Manual (spiral-bound)*
5012	UA Crane Signal Person Certification for Instructors	*Signaling (F/25)*
5015	Advanced Tube Bending	*Tube Bending (R/13)*
5016	Incorporating Pipe Pre-Fabrication Training into Apprenticeship	*IPT Pipe Trades Training Manual (spiral-bound)*
5021	Instrumentation Level II Administrator and Implementing a Process Controls Instrument Technician Program	*Applied Science of Instrumentation (IPT/IBEW)(F17)*
6000	Teaching HVACR Service Apprenticeship Curriculum	*HVAC and Refrigeration Systems Training Manual (ATP) (F/14)*
6001	HVACR Basic Electricity	*Basic Electricity (R/15)*
6002	Commercial Refrigeration and Supermarket Applications	*Refrigeration Mechanical Equipment Service Manual (R/14)*
6006	Teaching Hydronic Heating and Cooling Systems	*Hydronic Heating and Cooling (R/15)*
6008	Delivering a Building Automation Program in HVACR	*Building Controls (R/13)*
6009	Methods in Teaching Start, Test, and Balance	*Start, Test, and Balance (R/18)*
6012	Variable Refrigerant Flow (VRF)—The CITY MULTI Service Course (Mitsubishi)	*Mitsubishi CITY MULTI Service Course Book*

Required Text Materials for Classroom Use

6017	Pump Service and Maintenance	*Pumps (R/00)*
6022	Comprehensive Management of Refrigerants, Regulations, and Safety Issues Under EPA Section 608	*Conservation and Safe Handling of Refrigerants (R/19)*
6028	HVACR Flow Measurements and Concepts	*Start, Test, and Balance (R/18)*
6059	Safe Handling of Mildly Flammable Refrigeran	*Low GWP Refrigerant Safety: Flammable and Mildly Flammable Refrigerants (Esco)*
6061	Troubleshooting Residential HVACR Systems	*HVAC and Refrigeration Systems Training Manual (ATP) (F/14)*
6063	Commercial and Residential Boiler Service	*Low Pressure Boilers, 5th Edition, (ATP, 2018); Lessons Learned Servicing Boilers: Things to Know When Maintaining Boilers (Volume 3) ; Combustion Analysis and Fuel Efficiency*
7060	Understanding Fire Alarm Panels and Initiating Devices on Fire Protection Systems	*Basic Electricity (R/15)*
8002	Arc Welding Practical Fundamentals and Theory	*Welding Practices and Procedures for the Pipe Trades (ATP)(F/16)*
8012	Methods in Teaching Shielded Metal Arc Welding (SMAW)	*Welding Practices and Procedures for the Pipe Trades (ATP)(F/16)*
8013	Methods in Teaching Gas Metal Arc Welding (GMAW)	*Welding Practices and Procedures for the Pipe Trades (ATP)(F/16)*
8014	Methods in Teaching Advanced Gas Tungsten Arc Welding (GTAW)	*Welding Practices and Procedures for the Pipe Trades (ATP)(F/16)*
8047	Semiconductor Orbital Tube Welding	*Course 8047 Binder*

Purchase Material for Regional Training Classes at:

International Pipe Trades Joint Training Committee, Inc. (UA Bookstore)
687-B Commerce Drive
Upper Marlboro, MD 20774
Telephone: 301-218-1241
E-mail: iptbookstore@uanet.org or diannel@uanet.org
Shop online: shop.iptbookstore.com

Great Lakes Regional Training Center at WCC

Facility

The Great Lakes Regional Training Center (GLRTC) is a 15,000 square-foot facility with classrooms, labs, and equipment used in all aspects of United Association (UA) training. The GLRTC is an essential component of the training program and includes state-of-the-art welding labs with the latest in technology such as training on micro-turbines. The classrooms provide a flexible environment that can accommodate everything from computer-based learning to the latest equipment and technology that UA members are likely to find on jobsites all across North America.

What We Do

- Answer any questions about Regional Training Center services
- Assists students in web-based classes using Canvas™
- Help instructors develop online classes
- Facilitate student participation in WCC courses
- Provides academic advising for WCC associate degrees
- Evaluates transfer credits from other academic institutions
- Facilitates various onsite training courses throughout the year

Washtenaw Community College (WCC) is in partnership with the UA to provide associate degree and certificate programs for its members.

All UA apprentices registered with WCC receive 45 college credits upon completion of their apprenticeship in plumbing, pipefitting, sprinkler fitting, or HVACR. These credits can be applied towards an associate degree in industrial training, construction supervision, or journeyworker general studies.

Washtenaw Community College hosts the annual UA Instructor Training Program every August. During this week-long program, approximately 2,400 selected UA instructors take a variety of college level courses to become certified UA apprentice instructors. These courses are also applicable towards an associate degree in industrial training.

Washtenaw Community College is accredited by the Higher Learning Commission of the North Central Association.

Washtenaw Community College Leadership

- **Dr. Rose Bellanca,** President
- **Terry Barnes,** Vice President and Chief Financial Officer
- **James Becsey,** Vice President for Facilities, Development, and Operations
- **Linda S. Blakey,** Vice President of Student and Academic Services
- **Dr. Michelle K. Merusi,** Vice President of Economic Community and College Development
- **Brandon Tucker,** Executive Vice President for Instruction and Workforce and Community Development Officer
- **Dr. Marilyn Donham,** Dean of Apprenticeships and Skilled Trades Training Programs
- **John Leacher,** Chief of Public Safety and Security

Great Lakes Regional Training Center at WCC

Great Lakes Regional Training Center Staff

Jake Bacigal
Kim Billings
Julie Darling
Patrick Downey
Tony Esposito
Melissa Haverty
Kandi Jurek
Nicole Rose-Palmer
Henny Tasker
Lia Vallina
Arista Willaims

WCC Instructional Staff

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Lori Coleman
Bridget Corie
Deanna Coughlin
Myron Covington
Clint Craft
Nichole Cullin
Christine Douglas
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Allison Fournier
Shannon Fray
Mark Greathead
Jason Gribble
Antoniette Hopper
Gail Houghton
Amy Johnson
Charles Johnson
Jeffrey Klapper
Jennifer Klapper
Clint Kraft
Cari Littlefield
Nichole Marbury
Laura Odem
Jeffrey Peet
Russell Pickell
Angela Roeloffs
Phillip Rufe
Jennifer Runyan
Brenda Said-Wright
Debi Samuels
Karen Shaper
Claire Sparklin
Jason Slaughter
Elvis Smith
Claire Sparklin
Brian Spitsbergen
Jennifer Strip
Paul Wellman

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Miami, FL

Brian Andersen
Local Union 230
San Diego, CA

Christopher Armstrong
Local Union 440
Indianapolis, IN

Kyle Askam
Local Union 125
Cedar Rapids, IA

Thomas Baptie
Local Union 597
Chicago, IL

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Local Union 342
Oakland, CA

Neal Barhight
Local Union 537
Boston, MA

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Pittsburgh, PA

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Local Union 32
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Brannon Baxter
Local Union 72
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Local Union 420
Philadelphia, PA

Casey Becker
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National Inspection Testing & Certification
New Orleans, LA

Jeffrey Berger
Local Union 322
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Chad Birk
Local Union 539
Minneapolis, MN

Daniel Bliven
Local Union 7
Albany, NY

Jason Blondin
Local Union 136
Evansville, IN

Ralph Booth
Local Union 190
Ann Arbor, MI

Jason Branch
Local Union 562
St. Louis, MO

Zachary Brawner
Local Union 440
Indianapolis, IN

Christina Breitlow
Local Union 75
Milwaukee, WI

Joel Brock
Local Union 22
Buffalo, NY

Nicholas Brown
Local Union 502
Louisville, KY

David Bryant
Local Union 23
Rockford, IL

Vince Burrall
Local Union 486
Baltimore, MD

Thomas Cahill
Local Union 537
Boston, MA

Doreen Cannon
Local Union 55
Cleveland, OH

Alfred Caron
Local Union 51
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Thomas Carrigan
Local Union 7
Albany, NY

Ronald Casertano
Local Union 449
Pittsburgh, PA

Joshua Christensen
Local Union 434
Central & Western WI

Sean Cleary
Local Union 524
Scranton, PA

Michael Clinedinst
Local Union 486
Baltimore, MD

Kevin Convy
Local Union 268
St. Louis, MO

Shaun Coomey
Local Union 157
Terre Haute, IN

Joseph Cooper
Local Union 286
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Craig Coyne
Coyne First Aid, Inc.
Sellersville, PA

Melissa Coyne
Coyne First Aid, Inc.
Sellersville, PA

Kathryn Crosby
C2 Consulting, Inc.
Salt Lake City, UT

Brett Cutler
Local Union 420
Philadelphia, PA

Charles "Chip" Davis
Local Union 125
Cedar Rapids, IA

Christopher Davis
Local Union 602
Washington, D.C.

Raymond "Butch" Dee
Local Union 449
Pittsburgh, PA

Daniel "Eric" Defew
Local Union 184
Paducah, KY

Nicholas Devine
Local Union 853
Toronto, ON

Paul Disque
Local Union 412
Albuquerque, NM

Ryan Doherty
Viega, LLC
Bloomfield, CO

Curtis Dziwak
Local Union 597
Chicago, IL

Marcus Elmer
Copper Development
McLean, VA

Edwin "Ed" Engel
Local Union 420
Philadelphia, PA

Allan Fala
Local Union 189
Columbus, OH

David Farmer
Local Union 533
Kansas City, MO

Robert Finley
Local Union 1
New York, NY

Paul Fitzgerald
Local Union 354
Latrobe, PA

James Fogarty
Local Union 120
Cleveland, OH

Daniel Fortini
Local Union 1
New York, NY

John Franke
Local Union 533
Kansas City, MO

Joseph Franks
Local Union 542
Pittsburgh, PA

Jason French
Local Union 8
Kansas City, MO

Jason Fridley
Local Union 152
Morgantown, WV

Richard Fuess
Local Union 101
Belleville, IL

Kevin Gaby
Local Union 370
Flint, MI

Rick Gale
Local Union 34
St. Paul, MN

Omar Galindo
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Local Union 168
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Tulsa, OK

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Local Union 268
St. Louis, MO

John Holmes
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Toledo, OH

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Minneapolis, MN

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Central and Western, WI

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Buffalo, NY

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Windham, NH

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Providence, RI

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Tuscaloosa, AL

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Akron, OH

Timothy McQuiston
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Chicago, IL

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Lodi, NJ

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Syracuse, NY

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Denver, CO

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Jason Zeeveld
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Acknowledgements

We gratefully acknowledge the participation of the following companies and organizations in the 2025 United Associated Instructor Training Program.

ABB
Cary, NC

American Society of Sanitary Engineers (ASSE)
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Orland, IL

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Charlotte, NC

Aquatherm
Lindon, UT

ASC Engineered Solutions
Oak Brook, IL

Autodesk®
San Rafael, CA

AXX Air
Houston, TX

Baltimore Aircoil Company
Baltimore, MD

Bradford White Water Heaters
Ambler, PA

C2 Consulting, Inc.
Salt Lake City, UT

Calibre CPA Group
Washington, D.C.

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Silver Spring, MD

Chandler Systems, Inc.
Ashland, OH

Copeland North America
St. Louis, MO

Copper Development Association, Inc.
Harrisburg, PA

Coyne First Aid, Inc.
Sellersville, PA

Critical Systems
Boise, ID

Daikin Comfort Technologies
Houston, TX

Daikin North America
Minneapolis, MN

Destination Ann Arbor
Ann Arbor, MI

DeWalt
Towson, MD

E.H. Wachs/Orbitalum
Lincolnshire, IL

Emerson Climate Technologies
Brantford, ON, Canada

EPRI (Electrical Power Research Institute)
Charlotte, NC

The ESAB Group, Inc.
Denton, TX

Exact Tools
Akron, OH

Faro
Lake Mary, FL

Ferris State University
Big Rapids, MI

Fluke Engineering
Everett, WA

Geberit North America
Des Plaines, IL

GEM Energy
Walbridge, OH

Georg Fischer
Irvine, CA

Gerber
Chicago, IL

Global eTraining
Red Deer, Alberta

Green Mechanical Council
Washington, D.C.

Hammerhead Trenchless
Lake Mills, WI

Harris Products Group
Mason, OH

Hose Monster
Mundelein, IL

Hartford Steam Boiler Inspection & Insurance Co.
Hartford, CT

HVAC Excellence
Mount Prospect, IL

Hydratec, Inc.
Windham, NH

HYTORC
Mahwah, NJ

IAPMO
Ontario, CA

IrisVR
New York, NY

John E. Green Company
Highland Park, MI

K&R
Chantilly, VA

Kohler Company
Kohler, WI

The ESCO Institute
Mount Prospect, IL

The Kelly Companies
Cheverly, MD

Laars Heating Systems Company
Rochester, NH

Leica Geosystems
Norcross, GA

Liburdi Dimetrics
Davidson, NC

Lincoln Electric Company
Cleveland, OH

McElroy Manufacturing Inc.
Tulsa, OK

Mechanical Contractors of America
Rockville, MD

Miller Electric Manufacturing Company
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Milwaukee Tool
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Toledo, OH

Mitsubishi Canada
Mississauga, ON, Canada

Morgan Industrial Technology
Ozark, MO

National Fire Sprinkler Assoc.
Patterson, NY

nClarity
Bend, OR

NITC (National Inspection Testing and Certification)
Los Angeles, CA

North American Sustainable Refrigeration Council (NASRC)
Mill Valley, CA

North Park Innovations
Cattaraugus County, NY

O'Donoghue & O'Donoghue, LLP
Washington, D.C.

Olympus
Waltham, MA

Peerless Pump Company
Indianapolis, IN

Pentair Aurora Pump
Aurora, IL

Probend Industries
Santa Clara, CA

Procore
Carpinteria, CA

Quality Support Services, Inc.
Mesa, AZ

Reliable Automatic Sprinkler Co.
Liberty, SC

Sloan Flushmate
New Hudson, MI

Smith Equipment
Watertown, SD

Stratus Build
Larkspur, CO

ThinkEDU
Frisco, TX

TigerStop, LLC America
Vancouver, WA

Topcon
Livermore, CA

Tornatech, Inc.
Laval, CA

Triangle Engineering, Inc.
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Trimble
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Tri-Tool Inc.
Rancho Cordova, CA

TruTech Tools
Mogadore, OH

Union Sportsmen's Alliance
Nashville, TN

Urban Green Council
New York, NY

Viega, LLC
Broomfield, Colorado

U.S. Department of Energy National Training Center
Albuquerque, NM

Victaulic Company
Easton, PA

The Viking Corporation
Hastings, MI

Wagner Fire Safety
Chicago, IL

Weiler Corporation
Cresco, PA

Weil-McLain
Burr Ridge, IL

Western International
Bellville, TX

Xylem Inc.
Morton Grove, IL

ITP Staff and Office Locations

DIRECTOR OF EDUCATION AND TRAINING.....Morris J. Lawrence Building, Room ML 130
(734) 677-5398

Raymond Boyd, *Director of Education and Training*
Michael Galfano, *Assistant Director of Education and Training*
Suzanne Ellis, *Administrative Assistant*
Cindy Williams, *ITF Meeting and Event Planner*

REGISTRAR'S OFFICE.....Morris J. Lawrence Building, Room ML 121
(734) 677-5390

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Tyler Masengale, *Assistant Registrar*
Angela Sterling, *Office Professional*
Agatha Wolyn, *Curriculum Coordinator*

ITF OFFICE.....Morris J. Lawrence Building, Room ML 128
(734) 677-5394

Jocelyn Crowder, *Fund Administrator*
Helen Holmboe, *Office Professional*
Tracy Webster, *Office Professional*
Tara Silliker, *Accounts & Wellness Administrator-Canada*

IPT-JTC BOOKSTORE OFFICE.....Morris J. Lawrence Building, Room ML 105
IPT-JTC BOOKSTORE WAREHOUSE.....Morris J. Lawrence Building, Room ML 103
(734) 677-5392

Dianne Lash, *General Manager/Webstore Administrator*
Peggy Jarrett, *Finance Administrator*
Darlene Lee, *Office Professional*

INSTRUCTIONAL TECHNOLOGY......Morris J. Lawrence Building, Room ML 161
Lauren Friedman, *Instructional Technology Coordinator*

UA INFORMATION TECHNOLOGY.....Morris J. Lawrence Building, Room ML 123
(734) 677-5270

WCC-UA PROGRAM ADMINISTRATION.....Great Lakes Regional Training Center
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Kim Billings, *Logistics Director of UA Programs and Service*s
Julie Darling, *Learning Experience Designer*
Marilyn Donham, *Dean, Skilled Trades Training*
Anthony Esposito, *Technical Director of UA Programs and Services*
Melissa Haverty, *Training Programs Coordinator*
Kandi Jurek, *UA Program Manager – Student Services (WCC Associate Degree)*
Nicole Rose-Palmer, *Learning Experience Designer*
Henny Tasker, *Learning Experience Designer*
Lia Vallina, *Learning Experience Designer*
Arista Williams, *Managing Director Education and Technology*

STUDENT SERVICES/INFORMATION DESK.....Morris J. Lawrence Building, Lobby
Patrick Downey, *Manager of Conference Services* (734) 477-8989

INTERNATIONAL APPRENTICE CONTEST COMMITTEE
Michael Galfano, *Assistant Director of Education and Training*
Patrick Faley, *Chairman*
Paul Baker – *Plumbing*
Clancy Kelly – *Pipefitting*
Joe Mathews – *Sprinkler Fitting*
Donald Jessop – *Welding*
Kevin Wyngaard – *HVACR*

Local Emergency Contact Information

Destination Ann Arbor ▪ Hospitality Hotline ▪ 734-794-9899

To better serve you, Destination Ann Arbor provides a telephone hotline. A representative from Destination Ann Arbor is available to handle your dining, accommodation, and transportation concerns. Simply call 734-794-0649 and leave your name, call back number, and time of call. A representative will contact you back to assist.

RECOMMENDED EMERGENCY CARE

Ann Arbor Urgent Care
1000 E. Stadium Blvd., Ste. 1
Ann Arbor, MI 48104
734-769-3333
Email: info@a2urgentcare.com
http://www.a2urgentcare.com
Open 9am-10pm every day

South Huron Urgent Care Center
1649 S. Huron St.
Ypsilanti, MI 48197
734-480-0990
Email: info@shuconline.com
https://shucypsilanti.com
Open 8am-8pm (M-F; 8am-6pm Sat-Sun)

St. Joseph Mercy Hospital
5301 E. Huron River Dr.
Ann Arbor, MI 48105
734-712-3456

Walgreen's Pharmacy
3255 Washtenaw Ave.
Ann Arbor, MI 48104
Cross Streets: Northwest corner of Huron Parkway and Washtenaw
734-975-2902
Mon - Fri 9am - 9pm
Sat 9am - 6pm
Sun 10am - 6pm
*Drive-thru service available
*Pharmacy closed 1:30pm - 2:00pm for meal break

Dental Emergency
Liberty Dental
Robert Sevenson, DDS
3443 West Liberty Road
Ann Arbor, MI 48103
https://libertydentalplc.com
(734) 994-0909

CRISIS HOTLINE DIRECTORY

National Suicide Prevention Lifeline: 988
Crisis Text Line: Text Hello to 988
Washtenaw County Community Mental Health 24-hour hotline: 734-544-3050

AA MEETINGS

https://findrecovery.com/aa_meetings/mi/ann-arbor/
https://washtenawalano.club/inperson-meeting-list/

ANN ARBOR RUNNING COMPANY GROUP RUNS

https://www.annarborrunningcompany.com/pages/group-runs

RELIGIOUS DENOMINATIONS

Guide to area churches, synagogues, and religious fellowships
https://annarborobserver.com/city-guide/religion/
https://www.churchfinder.com/churches/mi/ann-arbor
https://www.churchfinder.com/churches/mi/ypsilanti

Public Safety at WCC
Parking Structure ▪ 4800 East Huron River Drive, Ann Arbor, Michigan
Telephone: 734-973-3411

The public safety office at WCC is located on the second floor of the Campus Parking Structure. Each emergency phone can dial 3411 to be connected to public safety personnel. After calling Public Safety, you must report the emergency to the ITF Office at 734-677-5398. If anyone off-campus needs to contact you for an emergency, please advise them to call 734-973-3411.

SERVICES PROVIDED
- Safety and Law Enforcement
- Security Escort
- Lost and Found
- Motorist Assists
- Medical Emergency First Response
- Key Issuance

MEDICAL EMERGENCY
If you encounter a medical emergency on campus:
- Call Public Safety immediately.
- Stay with the person.
- Do not move the person unless absolutely necessary.
- If he/she has stopped breathing do not attempt CPR unless you have been trained.
- Look for jewelry with an inscription indicating a medical condition.
- Never give anything to drink to an unconscious or semi-conscious person.
- Try to avoid getting blood or other bodily fluids on you.

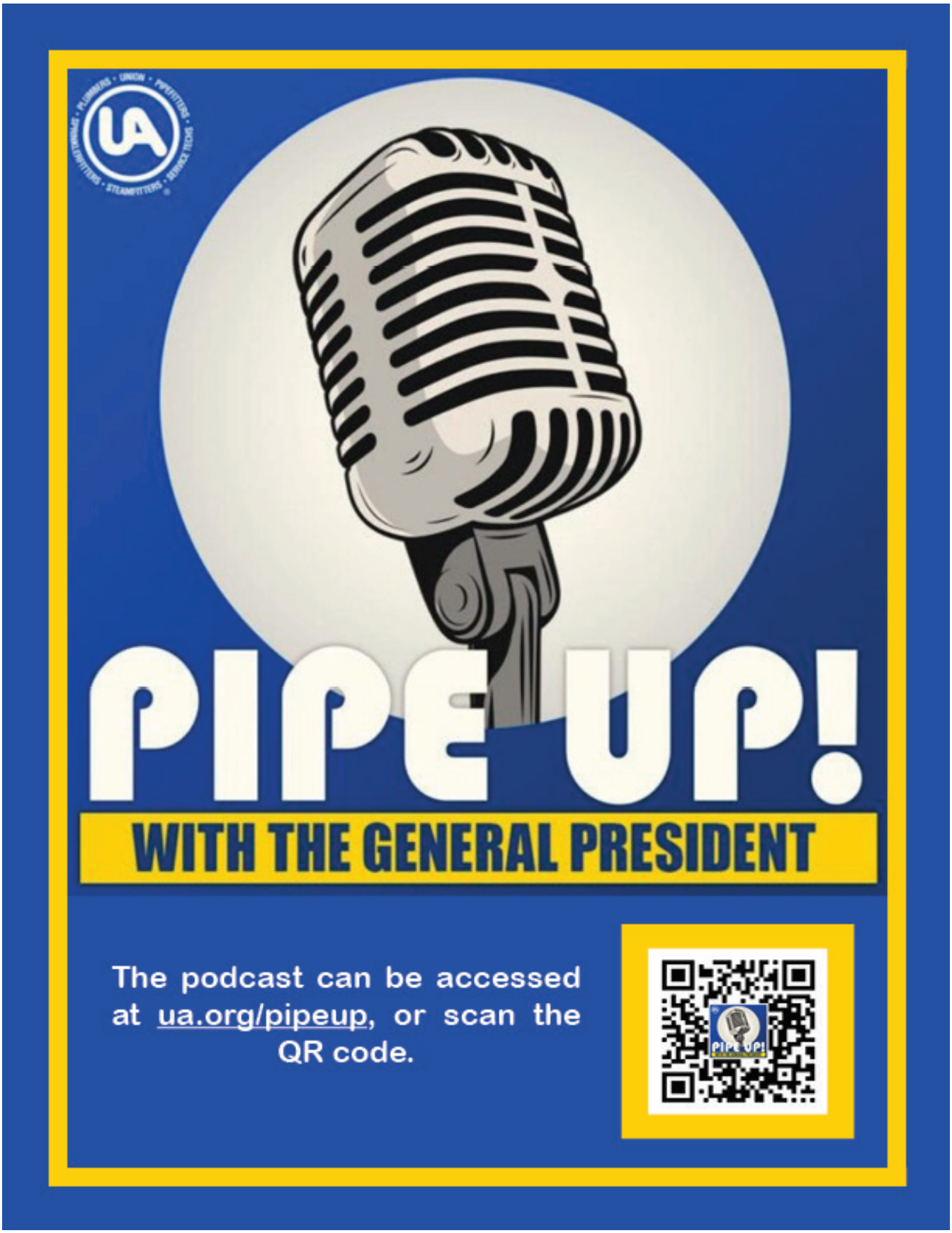
AUTOMATED ELECTRICAL DEFIBRILLATOR (AED) LOCATIONS
- ML Front Lobby Desk
- OE102 Hallway
- SC 2nd Floor Medical Room Hallway
- TI122 Front Reception Area
- GM 1st Floor Circulation Counter / 2nd Floor Computer Commons Counter
- PO126 Entrance
- LA 2nd Floor Hallway (across from 230)
- BE182 Reception Area
- GL 2nd Floor (across from offices)

FIRE
- Manually activate the fire alarm system.
- Immediately exit the building, closing doors behind you. (Do not use elevators)
- Call 911 or from campus phone call 3411.

FIRE EXTINGUISHERS
Reference Room Locator for specific locations.

TORNADO
- Stay away from doors and windows.
- Take a flashlight with you if one is available.
- Go to the ground floor of the building.
- Do not go outside until the all clear is given.

Pipe Up! Podcast



R

INTERNATIONAL TRAINING FUND

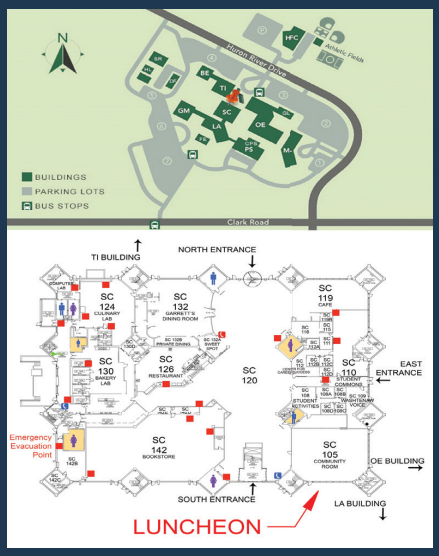
Saturday
August 9, 2025
11:30 a.m. to 2:30 p.m.
Student Center Community Room
Room 105

Tradeswomen Instructors:

Join us for an informal meet and greet on registration day. This event will be an opportunity for you to meet and network with other women instructors from across the country.

Please come to connect and share your ITP week experience with other UA sisters!

Lunch will be provided. Please RSVP to Laura Ceja at lceja@uanet.org or call 310-403-3484 with any questions.



JOIN US!

UA TRADESWOMEN INSTRUCTOR LUNCHEON

6th Annual ITP BIM Cup

Semper Fi & America's Fund

CORNHOLE TOURNAMENT

Saturday, August 9th

5:00 PM to 11:00 PM

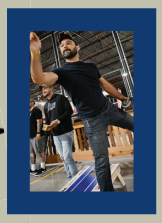
TOURNAMENT REGISTRATION FEE: $50 PER PERSON / $100 PER TEAM

SPECTATOR REGISTRATION FEE: $20 PER PERSON (INCLUDES FOOD & DRINK)

All proceeds go to the Semper Fi Fund!

Winners of each bracket announced at the UA BLOCK PARTY on Main Street, August 11, 6:00 pm

New Location



Doors Open at 3:00 PM

WIN PRIZES!

VENUE LOCATION:

Woverine Pickleball
235 Metty Drive
Ann Arbor, MI 48103

- *Doors open at 3:00 pm*
- *Tournament 5:00 pm - 11.00 pm*

REGISTER YOUR TEAM TODAY AND FOR MORE INFORMATION, GO TO:
https://www.annarbor.org/ua-cornhole/

ROCK AROUND THE BLOCK

MONDAY, AUGUST 11
6-10 PM ON MAIN STREET
DOWNTOWN ANN ARBOR

LIVE ENTERTAINMENT BY THE MILWAUKEE TOOL SHED BAND AND DINING IN THE STREETS

MAIN STREET Ann Arbor

STATE STREET DISTRICT ANN ARBOR

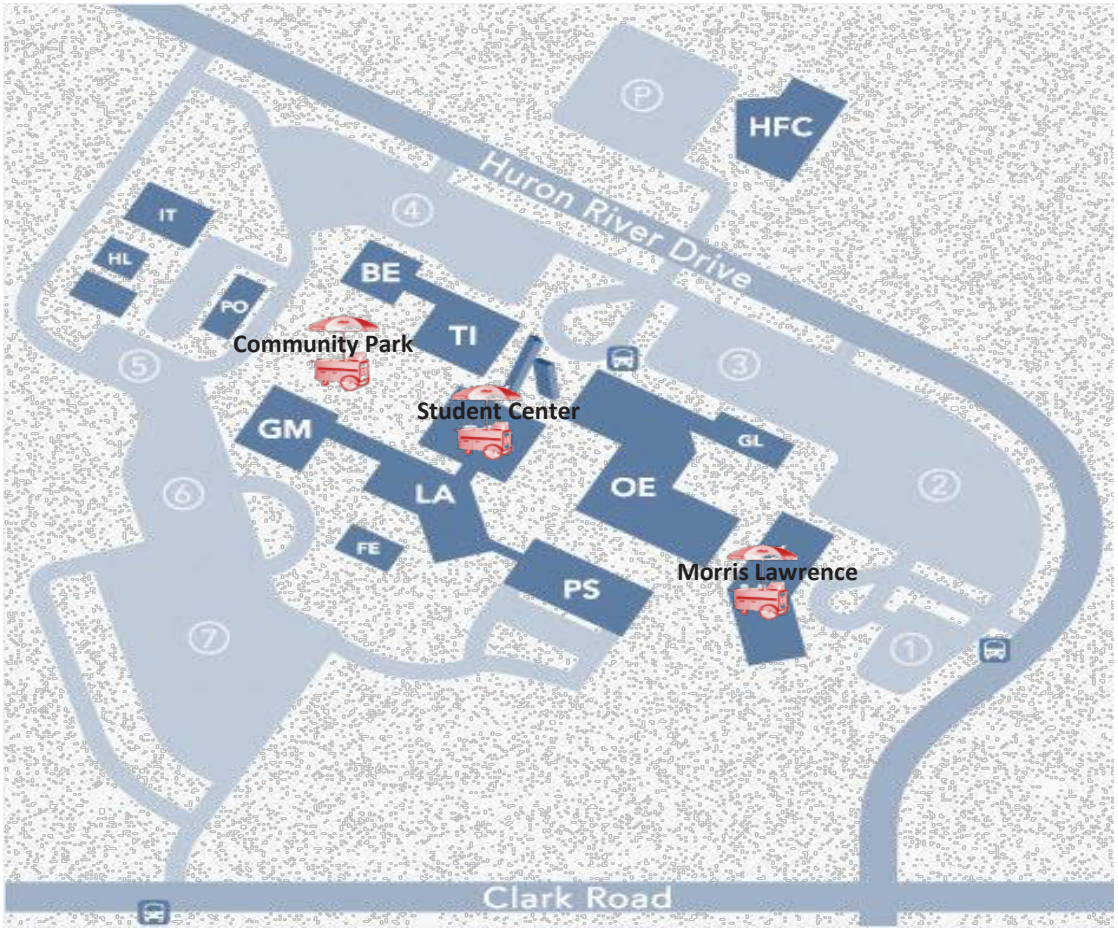
PLUMBERS · UNION · PIPEFITTERS · SPRINKLERFITTERS · STEAMFITTERS · SERVICE TECHS

TO BENEFIT SEMPER FI & AMERICA'S FUND

UNITED ASSOCIATION VETERANS IN PIPING

DESTINATION ANN ARBOR

Campus Food Map



Community Park Tent

Nine Food Trucks Featuring Different Cuisine:

- BBQ
- Burgers
- Burritos
- Chicken Sandwiches
- Corned Beef Sandwiches
- German Food
- Philly Cheesesteaks
- Pizzza
- Shawarma

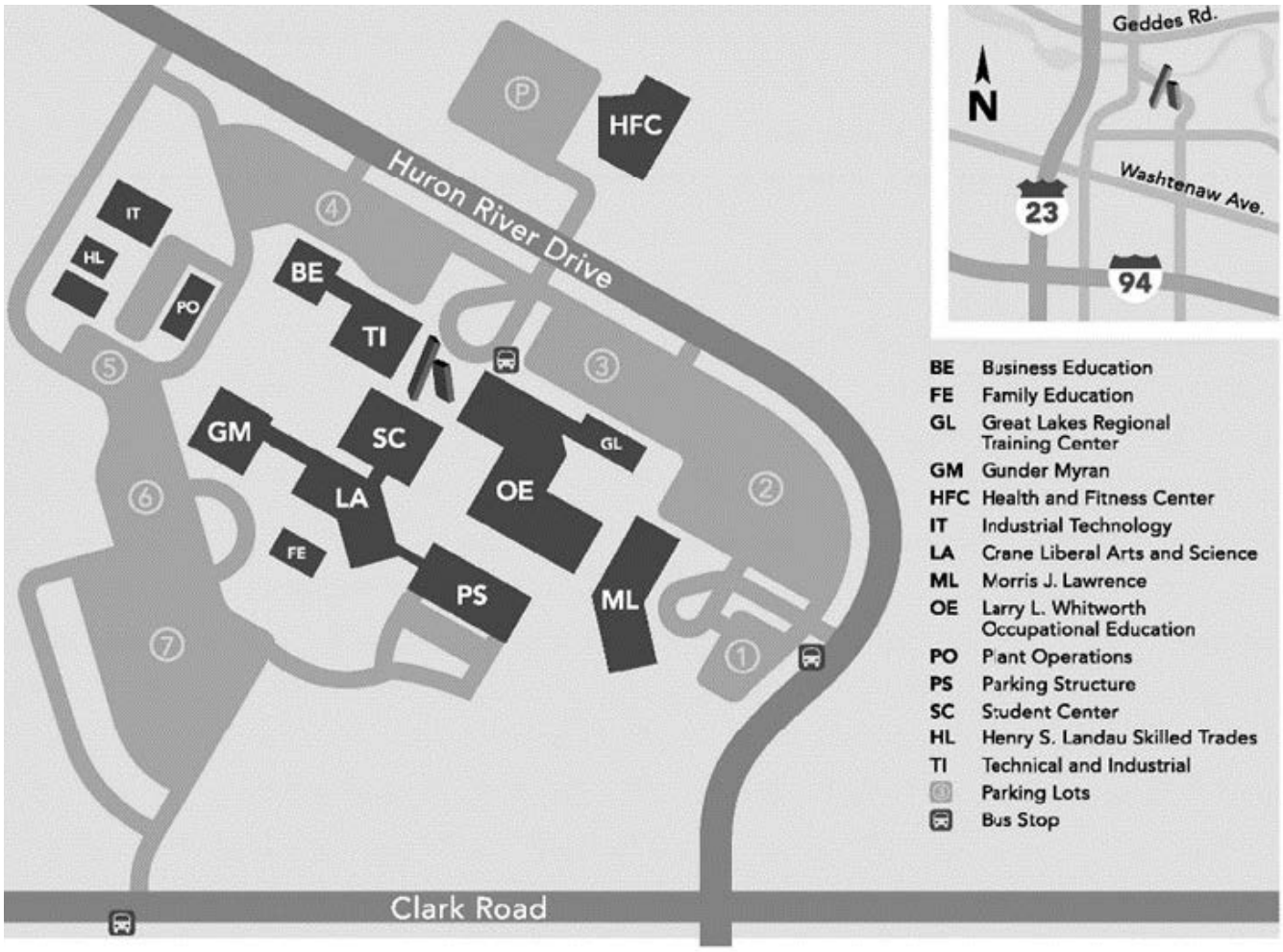
Student Center Building (Inside)

SC Grill – *Burgers, Deli Sandwiches, Chicken Sandwiches, Pizza, and French Fries*

Java Spot (6:30 a.m. - 3:00 p.m.) *Fresh made Salads, Wraps, Snack Cups, Coffee & Espresso*

Morris Lawrence Building

Rotating Chef's Table



Washtenaw Community College
4800 East Huron River Drive
Ann Arbor, Michigan 48105

Washtenaw Community College
is a Smoke Free campus.
No smoking on campus grounds.

The date for the 2026 Instructor Training Program is
Wednesday, August 5th - Monday, August 10th
Please Note Change in Days of the week

SCAN ME

PLUMBERS • UNION • PIPEFITTERS • SERVICE TECHS • SPRINKLERFITTERS • STEAMFITTERS

INTERNATIONAL TRAINING FUND

UNITED ASSOCIATION CAREERS FOR VETERANS

VIP

VETERANS IN PIPING