

# Course Descriptions - Spring 2023

## Applied Construction Math I

TECM 1001

16 Sessions

48 Hours

Prerequisite: None Required

This course is designed for students who need a refresher in basic math skills. Upon completion, this course will provide an understanding of fundamental operations using whole numbers, fractions, decimals and percentages. Basic math skills are strengthened through applications found in the construction industry. Students are introduced to logical problem solving.

## Backflow Awareness (16 CEU Hours)

PFPB 1091

2 Sessions

16 Hours

Prerequisite: Student must have a current Backflow Prevention Assembly Testers License.

This course offers Texas Commission of Environmental Quality (TCEQ) continuing education hours for those who have already received their BPAT license. The course consists of 16 hours of class and lab work, which will include all new and updated information from the industry and governmental bodies. The class is split with 4 hours in the lab and 12 hours in the classroom. Lunch will be provided.

Note 1: Students must bring a copy of the 10th Edition USC Manual for Cross-Connection Control, as required by TCEQ. Books are available for purchase upon request. Contact the CEF office for book cost and to request a copy PRIOR to the first day of class.

Note 2: This course also meets TCEQ Backflow continuing education requirements for Irrigation/Landscape Inspector License.

## Backflow Practical Skills Refresher (8 CEU Hours)

PFPB 1000

1 Sessions

8 Hours

Prerequisite: Student must have a current Backflow Prevention Assembly Testers License.

This course offers Texas Commission of Environmental Quality (TCEQ) continuing education hours for those who have already received their BPAT license. The course consists of 8 hours of class and lab work, which will include all new and updated information from the industry and governmental bodies. The class is split with 7 hours in the lab and 1 hour in the classroom. Lunch will be provided.

Note: This course also meets TCEQ Backflow continuing education requirements for Irrigation/Landscape Inspector License.

## Backflow Prevention Assembly Tester License

PFPB 1047

5 Sessions

40 Hours

Prerequisite: Student is required to have two (2) years experience in a water related industry such as Plumbing, Sprinkler Fitting, Fire Alarm, Irrigation, etc.

This course offers Texas Commission of Environmental Quality (TCEQ) certification in Backflow Prevention, using our new state-of-the-art classrooms and labs with expert instruction that is required for certification and testing of backflow assemblies in the state of Texas. Topics include: The History of Backflow Prevention; Testing and Repair of Assemblies; (RPZA, DCVA, PVB, and SRVB) Cross Connection Control Program With State and Local Ordinance Information and All Related Subjects. This 40-hour course is approved for 8-hour CEU in Customer Service Inspectors License, Irrigator License, Wastewater Operators License, Water Operators License and Water Treatment Specialist License.

Lunch is provided all 5 days.

Note 1: Students must bring a copy of the 10th Edition USC Manual for Cross-Connection Control, as required by TCEQ. Books are available for purchase upon request. Contact the CEF office for book cost and to request a copy PRIOR to the first day of class. 972-574-5200

Note 2: This course also meets TCEQ Backflow requirements for Irrigation/Landscape Inspector License.

## Basic Commercial Blueprint Reading

DFTG 1023

10 Sessions

30 Hours

Prerequisite: None required.

This course is designed for office, field and professional support staff. Topics include: Evolution of the Construction Project (The Development of the Drawings & Specifications); Background Principles (Cracking the Code); Drawing Types Used in All Categories Drawings; Reading Drawings for Information; Overview of Architectural MEP Drawings and Specifications.

## Basic Controls

6 Sessions

24 Hours

Prerequisite: None required

This is an introductory course into the understanding of basic control circuits. Installation of control circuits ranging from light switches to more complex systems with relays, start and stop controls, motor starters, safety switch devices of many types, timers, etc. We will review common terms, symbols and methods of various basic control installations.

## Commercial Field Engineering I

SRVY 1015

16 Sessions

56 Hours

Prerequisite: English or Spanish Math & Reading test, OR Applied Construction Math class or ESL class.

NOTE: If the Math/Reading test is taken in Spanish, student must take an ESL test as well.

All testing must be completed no later than Friday January 13, 2023.

This course will introduce the students with the role of a site layout technician, including drawings used in construction buildings today. Using the Site Layout 1 guide, the course topics will include: Introduction to Site Layout; Surveying Math; Surveying Equipment Use and Care, and Blueprint Reading for Surveyors.

## Commercial Field Engineering II

SRVY 1001

17 Sessions

80 Hours

Prerequisite: Commercial Field Engineering I

This course covers the basic mathematical principles used for field surveying and measurement as applied to basic construction field engineering. Topics include: Dimensional; Conversions to Decimal Equivalents; Unit Conversion; Algebra; Geometry-Perimeters; Area; Volumes; Trigonometry-Sine, Cosine & Tangents; Right Triangles; Law of Sine, Cosine Solving Oblique triangles; Instrument Setup Level Loops Records & Documentation Cut Fill Computation; Coordinate Geometry; Traverse Computations; Traverse Data Collection, Instrument Set Up; Horizontal Curves; and Vertical Curves.

Note: All students are required to attend one (1) additional 4 hour class.

## Commercial HVAC Service DT I-A

HART 1007

17 Sessions

80 Hours

Prerequisite: English or Spanish Math & Reading test, OR Applied Construction Math class or ESL class.

NOTE: If the Math/Reading test is taken in Spanish, student must take an ESL test as well.

All testing must be completed no later than Friday January 13, 2023.

The course topics are: Basic Carbon Steel Piping Practices; Introduction to Cooling, Introduction to Heating; Air Distribution Systems; and EPA Training/ Testing.

Note 1: EPA Section 608 Universal Certification is highly recommended to graduate from this program. EPA Exam is offered in Spring only.

Note 2: Graduation Requirement: Students enrolled in HVAC I-B will be required to take the EPA Section 608 Refrigerant Recovery Exams. This EPA Section 608 Refrigerant Recovery class is MANDATORY for all students enrolled in HVAC I-B, unless the student has already received the EPA Core and Type II Certification. Proof of EPA Certification is required.

## Commercial HVAC Service DT I-B

HART 1001

19 Sessions

88 Hours

Prerequisite: Commercial HVAC Service I-A

The course topics are: Basic Carbon Steel Piping Practices; Introduction to Cooling, Introduction to Heating; Air Distribution Systems; and EPA Training/Testing.

Note 1: EPA Section 608 Universal Certification is highly recommended to graduate from this program.

Note 2: Graduation Requirement: Students enrolled in HVAC I-B will be required to take the EPA Section 608 Refrigerant Recovery Exams. This EPA Section 608 Refrigerant Recovery class is MANDATORY for all students enrolled in HVAC I-B, unless the student has already received the EPA Core and Type II Certification. Proof of EPA Certification is required.

## Commercial HVAC Service I-B

HART 1001

19 Sessions

88 Hours

Prerequisite: Commercial HVAC Service I-A

The course topics are: Basic Carbon Steel Piping Practices; Introduction to Cooling, Introduction to Heating; Air Distribution Systems; and EPA Training/Testing.

Note 1: EPA Section 608 Universal Certification is highly recommended to graduate from this program.

Note 2: Graduation Requirement: Students enrolled in HVAC I-B will be required to take the EPA Section 608 Refrigerant Recovery Exams. This EPA Section 608 Refrigerant Recovery class is MANDATORY for all students enrolled in HVAC I-B, unless the student has already received the EPA Core and Type II Certification. Proof of EPA Certification is required.

## Commercial HVAC Service II-B

HART 1003

18 Sessions

80 Hours

Prerequisite: Commercial HVAC Service Level II-A

The course topics are: Chimneys; Vents & Flues; Basic Maintenance; Heat Pumps; Commercial Airside Systems; Air Quality Equipment; and Introduction to Hydronic Systems.

## Commercial HVAC Service IV-B

HART 2002

18 Sessions

80 Hours

Prerequisite: Commercial HVAC Service Level IV-A

The course topics are: Fundamentals of Crew Leadership; Commercial/Industrial Refrigeration Systems; System Startup and Shutdown; Heating & Cooling System Design; Alternative and Specialized Heating and Cooling Systems.

## Construction Site Leadership

CNBT 1009

12 Sessions

48 Hours

Prerequisite: None Required.

Introduction to skills and concepts necessary to effectively manage individuals and teams. Students will be exposed to leadership techniques that target communication, conflict resolution, problem solving, team organization and trust building.

## Electrical Blueprint Reading

ELPT 2043

12 Sessions

48 Hours

Prerequisite: None Required.

Blueprint reading covering the theory of projection, architectural and engineering symbols, relationship of views, and measuring with as they relate to the electrical construction industry.

## Electrical DT I-A

ELPT 1021

17 Sessions

80 Hours

Prerequisite: English or Spanish Math & Reading test, OR Applied Construction Math class or ESL class.

NOTE: If the Math/Reading test is taken in Spanish, student must take an ESL test as well.

All testing must be completed no later than Friday January 13, 2023.

The course topics are: Build Your Future in Construction, Occupational Overview (The Electrical Industry), Basic Safety, Safety for Electricians, Introduction to Hand Tools, Introduction to Power Tools, Hand Bending, Device Boxes, Introduction to Basic Rigging, Introduction to Construction Math, Introduction to Electrical Circuit, Electrical Test Equipment, Basic Communication Skills, and Basic Employability Skills.

Note 1: Students must have a copy of the 2020 NEC edition.

Note 2: All Electrical students are required to attend one (1) additional 4 hour class.

## Electrical DT I-B

ELPT 1011

18 Sessions

80 Hours

Prerequisite: Electrical I-A

The course topics are: Electrical Theory; Introduction to Materials Handling; Introduction to National Electrical Code; Wireways, Raceways, and Fittings; Conductors and Cables; Introduction to Construction Drawings; Basic Electrical Construction Documents; and Residential Wiring.

Students must have a copy of the 2020 NEC edition.

For students enrolling in Electrical I-A in Spring 2023, they will need to enroll in Electrical I-B as well; these are run simultaneously.

## Electrical I-B

ELPT 1011

18 Sessions

80 Hours

Prerequisite: Electrical I-A

The course topics are: Electrical Theory; Introduction to Materials Handling; Introduction to National Electrical Code; Wireways, Raceways, and Fittings; Conductors and Cables; Introduction to Construction Drawings; Basic Electrical Construction Documents; and Residential Wiring.

Students must have a copy of the 2020 NEC edition.

For students enrolling in Electrical I-A in Spring 2023, they will need to enroll in Electrical I-B as well; these are run simultaneously.

## Electrical II-B

ELPT 1020

17 Sessions

80 Hours

Prerequisite: Electrical II-A

The course topics are: Cable Tray; Conduit Bending; Conductor Terminations and Splices; Grounding and Bonding; Circuit Breakers and Fuses; and Control Systems and Fundamental Concepts.

Note: Students must have a copy of the 2020 NEC edition.

## Electrical III-B

ELPT 1057

18 Sessions

80 Hours

Prerequisite: Electrical III-A

The course topics are: Distribution Equipment; Transformers; Commercial Electrical Services; Motors Calculations; Voice, Data, and Video; and Motor Controls.

Note: Students must have a copy of the 2020 NEC edition.

## Electrical IV-B

ELTN 1043

18 Sessions

80 Hours

Prerequisite: Electrical IV-A

This level is crucial for Journeyman Exam Preparation. Course topics are: Specialty Transformers; Advanced Controls; HVAC Controls; Heat Tracing and Freeze Protection; Motor Operation and Maintenance; Medium Voltage Terminations/Splices; Special Locations; Fundamentals of Crew Leadership; Unit 5- Raceway and box Calculations- Part A- Raceway sizing; Insulated conductors- Chapter 9 tables 5 and 8; Raceway Properties and Sizing; Annex C; Part B- Outlet Box Fill; Sizing Boxes for Conductors; Part C- Pull and Junction Boxes- Sizing Requirements; Unit 6-Part A- Conductor sizing and Protection- Conductor insulation; Conductor Sizes; Equipment Terminal Ratings; Part B- Conductor Ampacity; Ambient Temperature Corrections; Rooftop installations; Current Carrying Conductors; Conductor Sizing; Feeder Tap Rules; Unit 8- Motor and A/C Calculations; Part A- Motor calculations- scope of article 430; Motor Full Load Currents; Motor Nameplates; Branch Circuit Sizing; Feeder Conductor Sizing; Overcurrent Protection; Overload Protection Sizing; Short Circuit and Ground Fault Protection.

Note: Students must have a copy of the 2020 NEC edition.

## Electrical Journeyman Prep

ELPT 2001

12 Sessions

48 Hours

Prerequisite (all are required): (1) At least three years experience in Electrical Trade. (2) Basic math skills with ability to solve simple algebraic equations.

This class will consist of: an intensive NEC review of Services and Service Equipment; Wiring Methods and Installation; Cabinets; Panelboards; Switchboards; Boxes and Conduit Bodies; Conductors; Motors and Generators; Utilization Equipment and Devices; Special Occupancies and Uses; Ambient Temperature and Other Conductor Derating Factors; Low Voltage Systems NEC requirements; and Hazardous locations.

Note: Students must have a copy of the 2020 NEC edition.

## Electrical Master Prep

ELPT 1040

13 Sessions

52 Hours

Prerequisite (all are required): (1) At least three years experience in Electrical Trade and preferably some classroom hours. (2) Basic math skills with ability to solve simple algebraic equations.

This class will consist of: an intensive NEC review of Services and Service Equipment; Wiring Methods and Installation; Conductors; Special Occupancies and Uses; Ambient Temperature Derating; Electrical Calculations of Single Family, Multi-Family and Two Family Dwellings; and Electrical Calculations of Commercial Structures (i.e. Schools, Offices, Stores, Banks, Marinas, etc.).

Note: Students must have a copy of the 2020 NEC Edition.

## English as a Second Language I

COMG 1000

16 Sessions

48 Hours

Prerequisite: None required.

This course prepares students to communicate orally in both public and work environments. Emphasis is placed on developing language functions, pronunciation, listening skills, and improving social and intercultural skills.

NOTE: Test-Out available for Level I at no extra charge.

Este curso prepara al alumno para comunicarse con confianza en situaciones sociales y en el trabajo. Se desarrollan las varias funciones del lenguaje, se mejora la pronunciación y comprensión auditiva y se practica la comunicacion social y transcultural.

Aprobación por medio de examen disponible para Nivel I sin cargo extra.

## English as a Second Language II

COMG 1001

16 Sessions

48 Hours

Prerequisite: English as a Second Language I

Students are taught to communicate orally in public and work environments. Emphasis is placed on developing language functions, pronunciation, listening skills, improving social and intercultural communication skills. Students acquire reading skills, vocabulary development, critical thinking skills, and the use of resources.

Este curso prepara al alumno para comunicarse con confianza en situaciones sociales y en el trabajo. Se desarrollan las varias funciones del lenguaje, se mejora la pronunciación y comprensión auditiva y se practica la comunicacion social y transcultural. Los cursos instruyen a los estudiantes, desarrollo de vocabulario, pensar en forma critica y el uso de los varios recursos disponibles en la institución.

## EPA Refrigerant Recovery Certification Training & Exam

HART 1043

1 Sessions

8 Hours

This course includes training and testing for Core, Types I, II, and III, required by the United States Environmental Protection Agency (EPA).

Course topics include: Refrigerant Transition and Recovery Certification.

Lunch is included.

Test is available in English or Spanish. A Spanish supplement to the English student handbook is available, upon request.

Note 1: ATTENTION, STUDENTS ENROLLED IN COMMERCIAL HVAC

SERVICE I-A will receive this training and the exam in Commercial HVAC Service I-B. Enrollment is not needed in this class.

Note 2: The instructor highly recommends that students pick up and study their EPA Section 608 book at least 2 weeks prior to the start of class. A book will not be issued until the class is paid. Early registration is encouraged.

Note 3: Students will need to bring their EPA Section 608 Book to the class. Students possessing an EPA Refrigerant Recovery card for one or more types must present the card to the Instructor the day of class, otherwise the student will be required to take all four types.

## Introduction Building Systems Design using AutoCAD

DFTG 1050

14 Sessions

40 Hours

This course is essential for all new AutoCAD users or as an excellent class for end users of other CAD systems who are migrating to AutoCAD. Upon completion of this course students will be able to create basic 2D drawings using the drawing and editing tools; organize drawing objects on layers; add text and basic dimensions; and prepare to plot the drawings. Students will learn essential skills in addition to more sophisticated techniques for drawing setup and productivity which is crucial for today's Autocad users in the construction industry.

## Pipefitting DT I-A

PFPB 1008

17 Sessions

80 Hours

Prerequisite: English Math Test or Applied Construction Math Class and English Reading Test

All testing must be completed no later than Friday January 13, 2023.

Course topics are: Core (Build Your Future in Construction), Orientation to the Pipefitting Craft, Basic Safety (Construction Site Safety Orientation), Ladders and Scaffolds, Introduction to Hand tools, Pipefitting Hand Tools, Introduction to Power Tools, Pipefitting Power Tools, and Introduction to Basic Rigging.

## Pipefitting DT I-B

PFPB 1043

18 Sessions

80 Hours

Pre-requisite: Pipefitting I-A

Course topics are: Introduction to Construction Drawings; Oxyfuel Cutting; Introduction to Construction Math; Fractions, Decimals angles, degrees, square, and square roots and right triangle; Motorized Equipment One; Basic Communication Skills; Basic Employability Skills; and Introduction to Material Handling.

All students are required to attend one additional class of 4-hour class

## Pipefitting I-B

PFPB 1043

17 Sessions

80 Hours

Pre-requisite: Pipefitting I-A

Course topics are: Introduction to Construction Drawings; Oxyfuel Cutting; Introduction to Construction Math; Fractions, Decimals angles, degrees, square, and square roots and right triangle; Motorized Equipment One; Basic Communication Skills; Basic Employability Skills; and Introduction to Material Handling.

All students are required to attend one additional class of 4-hour class

## Pipefitting II-B

WLDG 1017

18 Sessions

80 Hours

Pre-requisite: Pipefitting II-A

Course topics are: Socket Weld Pipe Fabrication; Butt Weld Ppe Fabrication; Butt Weld Pipe Fabrication; Excavations; and Underground Pipe Installlation.

## Pipefitting III-B

WLDG 2006

18 Sessions

80 Hours

Pre-requisite: Pipefitting III-A

Course topics will include: Stress Relieving and Aligning; Inline Specialties; Hot Taps; Maintaining Valves; Advance Pipe Fabrication and Fundamental of Crew Leadership.

## Pipefitting IV-B

PFPB 1050

18 Sessions

80 Hours

Course topics are Inline Specialties; Hot Taps; Fundamental of Crew Leadership; Maintaining Valves; and Advanced Blueprint Reading.

## Piping Isometric

PFPB 1006

16 Sessions

48 Hours

Prerequisite: None Required

This class defines an Isometric Drawing. It incorporates commerical drawings, mechanical pipe and plumbing details, and shows how to draw in an isometric format. Emphasis is stressed on how to utilize isometrics in construction day to day operations, including planning of material takeoffs, scheduling manpower, equipment, etc.

## Plumbing DT I-A

PFPB 1013

18 Sessions

80 Hours

Prerequisite: English or Spanish Math Test or Applied Math I and English or Spanish Reading Test

All testing must be completed no later than Friday August 19, 2022.

The course topics are: Build Your Future in Construction, Basic Safety (Construction Site Safety Orientation), Plumbing Safety, Introduction to Plumbing Profession, Introduction to Hand Tools, Introduction to Power Tools, Tools of the Plumbing Trade, Introduction to Construction Math, Introduction to Plumbing Math, Copper Tube & Fittings, and Cast-Iron Pipe and Fittings.

## Plumbing DT I-B

PFPB 1019

18 Sessions

80 Hours

Pre-requisite: Plumbing I-A

The course topics are: Steel Pipe & Fittings; Introduction to Construction Drawings, Introduction to Plumbing Drawings, Plastic Pipe and Fittings, Introduction to Basic Rigging; Introduction to Plumbing Fixtures; Introduction to Drain, Waste, & Vent (DWV) Systems; Introduction to Water Distribution Systems; Basic Communication Skills; Basic Employability Skills; and Introduction to Material Handling.

## Plumbing I-B

PFPB 1019

18 Sessions

80 Hours

Pre-requisite: Plumbing I-A

The course topics are: Steel Pipe & Fittings; Introduction to Construction Drawings, Introduction to Plumbing Drawings, Plastic Pipe and Fittings, Introduction to Basic Rigging; Introduction to Plumbing Fixtures; Introduction to Drain, Waste, & Vent (DWV) Systems; Introduction to Water Distribution Systems; Basic Communication Skills; Basic Employability Skills; and Introduction to Material Handling.

## Plumbing I-B

PFPB 1019

18 Sessions

80 Hours

Pre-requisite: Plumbing I-A

The course topics are: Steel Pipe & Fittings; Introduction to Construction Drawings, Introduction to Plumbing Drawings, Plastic Pipe and Fittings, Introduction to Basic Rigging; Introduction to Plumbing Fixtures; Introduction to Drain, Waste, & Vent (DWV) Systems; Introduction to Water Distribution Systems; Basic Communication Skills; Basic Employability Skills; and Introduction to Material Handling.

## Plumbing II-B

PFPB 2043

18 Sessions

80 Hours

Pre-requisite: Plumbing II-A

The course topics are: Installing & Testing Water Supply Piping; Installing Fixtures and Valves; Basic Electricity; Installing Water Heaters; and Fuel Gas & Fuel Oil Systems.

## Plumbing II-B

PFPB 2043

18 Sessions

80 Hours

Pre-requisite: Plumbing II-A

The course topics are: Installing & Testing Water Supply Piping; Installing Fixtures and Valves; Basic Electricity; Installing Water Heaters; and Fuel Gas & Fuel Oil Systems.

## Plumbing III-B

PFPB 2036

18 Sessions

80 Hours

Pre-requisite: Plumbing III-A

The course topics are: Sizing DWV & Storm Systems; Sewage Pumps & Sump Pumps; Corrosive-Resistant Waste Piping; Compressed Air and Service Plumbing.

## Plumbing IV - A

PFPB 1050

18 Sessions

80 Hours

Prerequisite: Plumbing III-B

The course topics are: Business Principles for Plumbers, Fundamentals of Crew Leadership, Water Pressure Booster & Recirculation System, and Indirect & Special Waste.

## Plumbing IV-B

PFPB 1050

18 Sessions

80 Hours

Pre-requisite: Plumbing IV-A

The course topics are: Hydronic & Solar Heating Systems, Codes, Private Water Supply Well Systems, Private Waste Disposal Systems, Swimming Pools & Hot Tubs, Plumbing for Mobile Home & Travel Trailer, and Introduction to Medical Gas & Vacuum Systems. Plumbing Journeyman Prep that will provide a review of subjects that are needed to pass the written exam for the plumber's journeyman license exam. For the practical portion of the exam the class will also include practice on our custom designed house, this house is comparable to the 2-story house used in the State of Texas Plumbing Exam in Austin.

## Plumbing Journeyman Exam Prep

PFPB 2005

1 Sessions

8 Hours

Prerequisite: None Required (however, it is recommended that the student has completed most or all of their required 8000 apprenticeship hours, so that they can schedule their Plumbing Journeyman Exam with the State Plumbing Board in Austin shortly after completing this course).

This seminar provides a review of subjects that are needed to pass the written exam for a plumber's Journeyman license. It also includes hands-on experience for the preparation of the practical section of the exam. This seminar will include a demonstration on our custom designed house, comparable to the 2-story house used in the State of Texas Plumbing Exam in Austin.

Lunch is included.

## Plumbing Journeyman Exam Prep

PFPB 2005

1 Sessions

8 Hours

Prerequisite: None Required (however, it is recommended that the student has completed most or all of their required 8000 apprenticeship hours, so that they can schedule their Plumbing Journeyman Exam with the State Plumbing Board in Austin shortly after completing this course).

This seminar provides a review of subjects that are needed to pass the written exam for a plumber's Journeyman license. It also includes hands-on experience for the preparation of the practical section of the exam. This seminar will include a demonstration on our custom designed house, comparable to the 2-story house used in the State of Texas Plumbing Exam in Austin.

Lunch is included.

### Roofing I-B

CRPT 1011

10 Sessions

80 Hours

Course Topics: Introduction to Roofing, Roofing Safety, Fall Protection Orientation, Drawings in Roofing, Introduction to Steep-Slope Roofing, Introduction Low-Slope Roofing, Substrates, Decks, and Roof Insulation, Sheet Metal in Roofing, and Rigging Practices.

### Roofing II-B

CNBT 1019

10 Sessions

80 Hours

Course Topics: EPOM Roof Systems, Build-Up Roof Systems, Modified Bitumen Roof Systems, Liquid-Applied Roofing, and Roofing Service and Repair.

### Sheet Metal I-B

MCHN 1049

18 Sessions

80 Hours

Pre-requisite: Sheet Metal II-A

The course topics are Triangulation; Sheet Metal Duct Fabrication Standards; Bend Allowances; Soldering; Air Distribution Systems; and Shop Production and Organization.

### Soldering and Brazing with Copper

1 Sessions

4 Hours

This course is designed for field personnel. This is a four (4) hour hands-on seminar. The most updated information and instruction will be provided on the following topics: copper material identification, preparing and installing brazed copper, preparing & installing copper material, hands-on brazing project, and safety.

### Soldering and Brazing with Copper

1 Sessions

4 Hours

This course is designed for field personnel. This is a four (4) hour hands-on seminar. The most updated information and instruction will be provided on the following topics: copper material identification, preparing and installing brazed copper, preparing & installing copper material, hands-on brazing project, and safety.

## Spanish for Construction Sites

COMG 1011

8 Sessions

16 Hours

Prerequisite: None required

This is a comprehensive Spanish language program that provides immediate access to functional language skills for non-Spanish-speaking construction site personnel. This course will also cover the many issues involved with effectively supervising Spanish-speaking employees. The language component utilizes phonetic encoding to present the most important Spanish commands, questions, and phrases pertinent to the construction site.

### STP 1- Leadership & Motivation

BMGT 1020

6 Sessions

24 Hours

Prerequisite: None Required.

This course will describe the value of effective supervision of workers and improve the construction supervisor's ability to lead and motivate others. Topics include: the dollar and sense of people in construction (the role of the construction supervisor), helping people perform better, motivating and leading others, positive feedback, training and orienting crew members, team building, and leadership skills in action.

### STP 2 - Communication

BMGT 1022

6 Sessions

24 Hours

Prerequisite: None Required

The course presents a body of knowledge and skills that today's construction supervisors need in order to be effective communicators on their job site. Topics include: effective communication, learning to listen, carrying on conversations, persuasion, negotiation, and confrontation, communicating with your crew, putting it in writing, meetings that work, electronic communication, and improving communication.

### STP 3 - Planning & Scheduling

CNBT 1072

5 Sessions

20 Hours

Prerequisite: None Required.

This course will help construction supervisors understand ways in which planning and scheduling saves time and money, while increasing quality in the construction process. Topics include: preparing the project plan, communicating the plan, the critical path, computer use in scheduling, using the schedule on the jobsite, updating the construction schedule, the schedule as documentation, and using planning and scheduling.

## STP 4 - Contract Documents

CNBT 1073

5 Sessions

20 Hours

Prerequisite: None Required.

This course will provide information about contract documents and construction law to help supervisors recognize the roles and responsibilities of all contracted parties, develop and understand how contract documents can be helpful to solve problems and resolve conflicts, and to develop positive relationships between all parties in the construction process. Topics include: introduction to contract documents and construction law, creating a positive environment through partnering contractual relationships, contract forms and documents, managing general conditions, good documentation practice changes, differing site conditions, time impacts, and negotiation of resolutions.

## STP 5 - Improving Productivity & Managing Project Cost

BMGT 1021

8 Sessions

30 Hours

Prerequisite: None Required.

This course will cover: understanding how project estimates are compiled, how to compare actual project costs with those estimated, and how to control costs to meet the estimate. This course also details how productivity is measured, how the supervisor plays a major role in increasing jobsite productivity, and how a small increase in productivity can have a significant impact on the time and cost of a project.

Specific topics include: construction estimates, who controls project costs, reporting and analyzing actual costs, planning for cost control, cost control strategies, labor cost variances, working with project partners, managing risk and loss potentials, cost control strategies, post-project evaluations, benchmarking construction productivity, improving productivity through pre-planning, new skills for effective supervision, personnel management, equipment management for productivity improvement, jobsite productivity, planning and scheduling, quantifying lost labor productivity, and record keeping, control, changes, & defect analysis.

## STP 6 - Risk Management & Problem Solving

OSHT 1015

6 Sessions

24 Hours

Prerequisite: None Required.

This course will cover the roles and responsibilities of a construction supervisor in accident prevention and loss control. Topics include: safety leadership, communication and expectations, planning for site safety, site safety management, site security and protection, multi-employer jobsite safety, construction risk management, safety and human resources, and regulatory procedures, record keeping & documents.

## Texas Lien & Bond Seminar

1 Sessions

7 Hours

It's more important than ever to protect your rights to get paid!

Lien rights are very valuable and shouldn't be waived without knowing it. To keep from waiving your lien rights, you must know when to take action and what action to take. Time deadlines and filing the correct forms are crucial. You cannot afford to miss this valuable information and instruction.

Presented by

Regan O'Steen,

Thomas, Feldman & Wilshusen, LLP of Dallas

Sponsored by ASA & CEF

The firm of Thomas, Feldman & Wilshusen, LLP specializes in construction law. They represent general contractors, subcontractors, and suppliers in all aspects of construction law, including review and negotiations of contracts, processing delay claims, jury trials and appeals, arbitrations, and perfecting lien and bond claims. Thomas, Feldman & Wilshusen, LLP is the legal counsel for the American Subcontractors Association/North Texas Chapter, ASA of Texas and the Texas Construction Association (TCA).

## Water Treatment Specialist (8 CEU hrs)

EPCT 1015

2 Sessions

16 Hours

Prerequisite: Student must have a current Water Treatment Specialist License.

This 16 hour course counts toward 8 Texas Commission of Environmental Quality (TCEQ) continuing education hours for those who have already received their WTS license. The course consists of class and lab work, and includes all new and updated information from the industry and governmental bodies. The class is split with 4 hours in the lab and 12 hours in the classroom.

Lunch will be provided.

Note: Students must bring a copy of the 10th Edition USC Manual for Cross-Connection Control, as required by TCEQ.

Books are available for purchase upon request. Contact the CEF office for book cost and to request a copy PRIOR to the first day of class.

## Welding Construction I-A

WLDG 1023

18 Sessions

80 Hours

Prerequisite: English or Spanish Math Test or Applied Construction Math Class, and English or Spanish Reading Test and ESL Placement Test.

All testing must be completed no later than Friday January 13, 2023.

Consists of 80 hours; 70% hands-on per semester. Course topics will include: Basic Safety (Construction Site Safety), Introduction to Hand Tools, Introduction to Power Tools, Basic Communication Skills, Basic Employability Skills, Oxyfuel Cutting, Welding Quality, SMAW (Equipment and Set Up, Beads and Fillet Welds, Open Root Groove Welds/Plate, and Groove Welds with Backing), Plasma Arc Cutting, and Base Metal Preparation.

Students are also required to enroll in both Welding Construction I-A and Welding Construction I-B.

## Welding Construction I-B

WLDG 1007

18 Sessions

80 Hours

Prerequisite: English or Spanish Math Test or Applied Construction Math Class, and English or Spanish Reading Test and ESL Placement Test.

Consists of 80 hours; 70% hands-on per semester. Course topics will include: Basic Safety, Introduction to Construction Math, Introduction to Construction Drawings, Introduction to Material Handling, Introduction to Basic Rigging, Oxyfuel Cutting, Welding Safety, Joint Fit-Up and Alignment, SMAW (Electrodes, Beads and Fillet Welds, etc), and Air Carbon Arc Cutting and Gouging.

Students are also required to enroll in both Welding Construction I-A and Welding Construction I-B

## Welding Construction II-A

WLDG 1057

18 Sessions

80 Hours

Course topics will include: Reading Welding Detailed Drawings; SMAW - Groove Welds with Backing-Plate; SMAW - Open Root Groove Welds Plate; and SMAW -Open Root Pipe Welds.

Student needs to enroll in Welding Construction II-B; these are run simultaneously.

## Welding Construction II-B

WLDG 1034

18 Sessions

80 Hours

Course topics will include: Reading Welding Detailed Drawings; Air-Carbon Arc Cutting and Gouging; Plasma Arc Cutting; SMAW- Groove Welds with Backing - Plate; SMAW-Open Root Groove Welds - Plate; and SMAW- Open Root Pipe Welds.

Students are required to enroll in both Welding Construction II-A and Welding Construction II-B.

## Welding Construction IV-A

WLDG 2047

18 Sessions

80 Hours

Course topics will include: GTAW- Carbon Steel Pipe; GTAW-Low Alloy and Stainless Pipe; GTAW Aluminum Plate; GTAW - Aluminum Plate; GMAW Plate; FCAW Plate; GMAW- Pipe; and FCAW Pipe.

Students are required to enroll in both Welding Construction IV-A and Welding Construction IV-B.

## Welding Construction IV-B

WLDG 2051

18 Sessions

80 Hours

Course topics will include: GTAW - Carbon Steel Pipe; GTAW - Low Alloy and Stainless Steel Pipe; GTAW Aluminum Plate; GMAW-FCAW Equipment and Filler Metals; GMAW Plate; FCAW Plate; GMAW-Pipe; and FCAW-Pipe.

Students are required to enroll in both Welding Construction IV-A and Welding Construction IV-B.