International Union of Operating Engineers

AFFILIATED WITH THE AMERICAN FEDERATION OF LABOR AND CONGRESS OF INDUSTRIAL ORGANIZATIONS

Training Course Schedule

Courses from July 27, 2024 - September 25, 2024

Course - Session	Date(s)
Pipeline - ONLINE OILER TRAINING	Aug 1, 2024 - Aug 1, 2024
Pipeline - ONLINE OILER TRAINING	Sep 1, 2024 - Sep 1, 2024
HVAC Systems 1	Sep 9, 2024 - Sep 13, 2024
Pump Maintenance & Operation	Sep 9, 2024 - Sep 12, 2024
Electrical Systems 1	Sep 9, 2024 - Sep 13, 2024
OSHA 510 Safety & Health Standards for the Construction Industry	Sep 10, 2024 - Sep 13, 2024
Pump Maintenance & Operation	Sep 13, 2024 - Sep 16, 2024
OSHA 500 Trainer Course Construction Industry	Sep 14, 2024 - Sep 17, 2024
Bulldozer Operations	Sep 16, 2024 - Sep 20, 2024
Crane Operations - Advanced Crane Operations	Sep 16, 2024 - Sep 20, 2024
Automatic Transfer Switch (ATS) for Generators	Sep 17, 2024 - Sep 19, 2024
Advanced Controls & Building Automation Systems	Sep 21, 2024 - Sep 23, 2024
Excavation Operations	Sep 23, 2024 - Sep 27, 2024
OSHA 521 Industrial Hygiene	Sep 23, 2024 - Sep 27, 2024
Mechanics Training - Hydraulic Fundamentals	Sep 23, 2024 - Sep 27, 2024
Crane Operations - Liebherr 81K.1 Fast Erecting Tower Crane Assembly/Disassembly	Sep 23, 2024 - Sep 27, 2024
Crane Operations - Intro To Tower Crane Operations	Sep 23, 2024 - Sep 27, 2024
Rigging Safety/Signaling Safety Train the Trainer	Sep 23, 2024 - Sep 27, 2024

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Crane Operations - LMI Setup & Crane Operations	Sep 23, 2024 - Sep 27, 2024
GPS Training for Instructors Only	Sep 24, 2024 - Sep 26, 2024

Visit **https://iuoe-itrs.org** for a Full Schedule and to Register for Classes

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Training Course Descriptions

PIPELINE - ONLINE OILER TRAINING

This is an online class only. The class will take approx. 8 hours to complete, you will be able to complete the class at your own pace, meaning you can log in and out as needed to complete the course.

This class is intended for anyone who wants to work as an oiler in the pipeline industry. It is also intended for operators who have never worked in the pipeline industry.

Topics discussed and included in the course:

- Work Environment
- Duties of a Pipeline Oiler
- Nomenclature
- Work Ethic
- Vocabulary Games and review
- Final Exam
- Final Vocabulary Exam

The member will receive a certificate of completion at the end of the course.

HVAC SYSTEMS 1

Heating Ventilation Air Conditioning and Refrigeration are core topics for Stationary Engineers. This course is designed to give students an solid understanding of HVACR. After taking this class students will have:

- Knowledge of fundamental refrigeration principles.
- Knowledge of fundamental HVAC principles.
- Knowledge of HVAC system components.

- Knowledge of HVAC control systems.
- Understand air comfort and quality.
- Ability to solder and braze connections for piping systems.

This course includes hands on training with state of the art tools and equipment.

PUMP MAINTENANCE & OPERATION

Successful and efficient operations and maintenance of any mechanical system can only be accomplished with a clear understanding of the components making up the mechanical system and how they interact. Stationary engineers are responsible for the operations and maintenance of the Chilled Water, Condenser Water and Hot Water systems to just name a few. The heart of each of these is the pump.

In this four-day course students will become familiar with different types of pumps, their operating principles, how to diagnose and troubleshoot issues, and their proper maintenance and repair procedures. Focus is on hands on activities.

ELECTRICAL SYSTEMS 1

Electricity is a fundamental part of most tasks that the stationary engineer performs. Whether one works with motors, chillers, boilers, air handlers, lighting, or controls, electricity plays a part of each. This course equips the stationary engineer with knowledge of electrical principals, electrical safety, how to perform electrical calculations, and gives an understanding of both AC and DC electrical components. Students have the opportunity to also perform hands on activities to reinforce the coursework.

This course is a suggested pre-requisite for Electrical Systems 2 course.

OSHA 510 SAFETY & HEALTH STANDARDS FOR THE CONSTRUCTION INDUSTRY

OPEN TO IUOE INSTRUCTORS ONLY

This course covers OSHA policies, procedures, and standards, as well as construction safety and health principles. Topics include 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. Completion of this class is required prior to taking the OSHA 500 class.

OSHA 500 TRAINER COURSE CONSTRUCTION INDUSTRY

OPEN TO IUOE INSTRUCTORS ONLY

AUTHORIZES INSTRUCTOR TO TEACH: 10- and 30-Hour Construction Industry Outreach courses.

BULLDOZER OPERATIONS

The IUOE Training & Education Center will be offering classes in all areas of bulldozer operation from beginner through advanced.

Topics covered:

- Working on Slopes
- Slot Dozing
- Backfilling
- Cuts and Fills
- Working with Grade Control.

CRANE OPERATIONS - ADVANCED CRANE OPERATIONS

Advanced Crane Operations (Level 3) - This course focuses on “TWO CRANE PICKS”, the math and paperwork necessary to make them. In addition, this class covers the requirements for ground bearing pressure, rigging, critical lift paper work and calculations. The students will operate the cranes every day and will execute a two-crane blind pick by the end of class.

AUTOMATIC TRANSFER SWITCH (ATS) FOR GENERATORS

The focus of this course is on Automatic Transfer Switches & Emergency Standby Generator and how they may be applied in a variety of settings and industrial sectors. Standby generations are used primarily to provide backup power if utility power from the utility electrical distribution system is lost.

This course will discuss the operation of Automatic Transfer Switches & Generators, their application, how they are integrated into the overall electrical system, auxiliary supporting equipment and generator package maintenance. This course will cover many practical examples and will be interactive for students to gain a broad overall understanding of standby generators.

At the completion of this course, students will be able to perform startup, commissioning and maintenance activities on automatic transfer switches and controllers related to generators. Students will learn about the transfer switch equipment that is currently being used in today's industry. Hands-on activity will comprise at least half of the time spent in training activities.

ADVANCED CONTROLS & BUILDING AUTOMATION SYSTEMS

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Prerequisite: Students should have taken Basic Controls and Building Automation Systems or have similar work experience

This advanced course has been developed for individuals who want to develop the understanding of how DDC controls and Building Automation Systems are installed, wired, operated, and programmed, also included is the insight of the various related software packages, that drive and manipulate these systems. We will discuss and demonstrate advanced control technologies dealing with the architecture of various manufactures of Building Automation Systems. We will demonstrate how they are installed, wired, and then programmed. Also, there will be main topic lectures on BAS Supervisory Controllers, Standalone controllers, and their communication protocols.
There will also be lectures on advanced control strategies and the understanding of building optimization for curtailing the use of energy.
After the completion of this course the participants will be able to:

- Describe the different types of control actions and when to use them
- Identify Building Automation System main components and where their used
- Define and select the proper Automation System for various locations
- Define the different types of Analog and Binary inputs and outputs
- Understand system wiring through various schematic diagrams of installed systems
- Wire Building Automation System main components

- Understand the various types of BAS communication protocols
- Program various type of industry controllers
- Comprehend the different types of operator interfaces and how they communicate
- Describe control strategies and how buildings are optimized for peak efficiency
- Define the different types of programming graphic methods

EXCAVATION OPERATIONS

Excavation Operations – The IUOE Training and Education Center will be offering the Excavation Operations course for Operators with skill levels of beginner through advanced. This 40-hour course will include classroom instruction and hands-on training. Classroom instruction topics will include machine safety, working around utilities and OSHA regulations that apply to trenching/excavation activities. Hands-on will consist of machine control familiarization, benching and sloping techniques, slot dozing and backfill operations. Upon competition of this course, the member will understand trench safety techniques and how to move dirt efficiently.

OSHA 521 INDUSTRIAL HYGIENE

OPEN TO IUOE INSTRUCTORS ONLY

AUTHORIZES INSTRUCTOR TO TEACH: Respiratory protection as a standalone course or as part of other courses, such as HAZWOPER.

MAIN TOPICS COVERED: Topics covered include terminology, OSHA Standards, NIOSH certification, respiratory protection programs, and medical evaluation recommendations.

MECHANICS TRAINING - HYDRAULIC FUNDAMENTALS

Mechanics Training - **Hydraulic Fundamentals**

This course will give the student a strong foundation in hydraulic systems used in mobile equipment. Upon completion, participants will be able to:

- Describe the principles of hydraulics.
- Identify and describe the function of the components that make up a typical hydraulic system.
- Identify and read the schematic symbols in a typical hydraulic schematic.
- Understand the use and operation of load sensing variable displacement pumps.

The learning environment will be established in both the classroom and the service shop.

CRANE OPERATIONS - LIEBHERR 81K.1 FAST ERECTING TOWER CRANE ASSEMBLY/DISASSEMBLY

Liebherr 81K.1 Fast Erecting Tower Crane Assembly/Disassembly - This course will cover the manufacturers procedures of erection, dismantle and climbing of the Liebherr 81K.1 Fast Erecting Tower Crane. Also covered is the inspection and setting of all safety limits. Students will gain hands-on experience of the controls for operating while erecting and dismantling the crane. During the multiple erect and dismantles of the crane during the week, changes in jib configuration will be performed. Load testing and programming of operational and load limits will also be performed.

CRANE OPERATIONS - INTRO TO TOWER CRANE OPERATIONS

Introduction to Tower Crane Operations (Level 1) - This course is for students with previous crane experience. The course will introduce students to three types of tower cranes: Hammerhead tower cranes, luffing boom tower cranes and self-erecting tower cranes. This course will cover cab controls and operating procedures. A major portion of the class will be hands on exercises teaching load control and operational dynamics.

RIGGING SAFETY/SIGNALING SAFETY TRAIN THE TRAINER

OPEN TO IUOE INSTRUCTORS Only

AUTHORIZES INSTRUCTOR TO TEACH: Rigging and Signaling Safety Awareness.

Topics include the configuration and types of slings, rigging hardware, the types of hitches and basic calculations, communications, power line safety, and lift plans. Students are given rigger and signal person qualifi cation criteria and protocol for issuing IUOE CPWR cards as a qualified rigger and/or a qualified signal person.

CRANE OPERATIONS - LMI SETUP & CRANE OPERATIONS

LMI Set-up & Crane Operations (Level 1) - This course is an entry level course on the set up and operations of a mobile crane. This course has classroom and hands-on exercises that cover basic crane knowledge, load charts, daily inspection, LMI set-up, outrigger and jib set-up for a variety of cranes.

Prerequisites for Level 1 – Member must have completed ITEC Level 1 Crane Operations course or be certified/licensed for hydraulic and/or lattice boom cranes. Certifications/licenses include NCCCO, OECP, Red Seal, Connecticut or New York State license.

GPS TRAINING FOR INSTRUCTORS ONLY

GPS Training for Instructors Only - Courses are available to active IUOE Instructors only.