

IRONWORKER INSTRUCTOR TRAINING (IWT)

IWT 101 Principles of Instruction and Instructional Planning (1.5 Credits)

22.5 lecture, 1.5 total contact hours

In this course, the participant is provided an opportunity to get up in front of the course participants and make a short presentation. Topics include introducing and summarizing a classroom presentation, presenting an interactive presentation, presenting a demonstration, and questioning and reinforcement techniques. Participants are also taught how to plan and conduct courses within the local union's curriculum. In addition, participants will learn how to develop a course syllabus, write learning objectives, plan for teaching in the classroom and shop components of a course, use Ironworker training packages, and use basic audio-visuals. Participants will also learn how to administer tests, record test results, complete a grade book, and determine if an apprentice has passed a course. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 102 Testing Strategies, Communication and Motivation (1.5 Credits)

22.5 lecture, 1.5 total contact hours

Developing and administering knowledge and skill tests are covered in this course. Participants will learn to plan for developing tests and then administering tests using multiple-choice, true-false, matching, and completion test items. Participants will also learn to administer and score performance or skills tests. Additional focus is on techniques and strategies for motivating adult learners in an instructional setting and developing good communication and listening skills. Also addressed is the issue of classroom discipline and control. Role-playing and simulation activities are included. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 103 Illustrated Lectures and Facilitation Skills (1.5 Credits)

22.5 lecture, 1.5 total contact hours

The focus of this course will be on further developing the classroom skills of experienced instructors. Participants will prepare and deliver one or more presentations during micro-training exercises. Classroom instruction will be delivered primarily through PowerPoint presentations and teaching demonstrations. The course focus is also on facilitation and classroom training skills the participant can use to make classroom sessions more interactive and participatory. In this course, participants will learn how to develop and use small-group activities including case studies and role-plays. Participants will also learn how to facilitate brainstorming sessions and how to lead discussions. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6; IWT 101

IWT 130 Introduction to Computers (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course is designed for participants who have never (or rarely) used a computer. Working in Windows 7, participants will learn about common computer terminology, hardware and software. This course is structured to maximize the student's understanding of computers through a lecture-based and hands-on approach. Topics include keyboarding, how to use a mouse, file management (how to create, save, move, delete, and manipulate files), basic word processing (Microsoft Word), how to back up files to a CD, how to transfer files using a USB flash drive, how to set up an LCD projector, and how to send and receive e-mail. This course will not include PowerPoint, Access or Excel. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 131 Computer Applications I (1.5 Credits)

22.5 lecture, 1.5 total contact hours

In this course, the participant is introduced to Microsoft Word and PowerPoint. Topics include the fundamentals of formatting and creating documents (e.g., letters, handouts, PowerPoint presentations, and tests), graphics, and tips and tricks of the Internet. The participant will develop realistic course materials and present the solutions at the end of the week. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6; IWT 130 or related computer experience

IWT 132 Computer Applications II (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course is designed for the participant who has completed the Computer Applications I (IWT131) course or has extensive experience with Microsoft Office. Upon completion of this course, the participant will be able to use Microsoft Access and Excel. Instruction on advanced formatting within Microsoft Word and PowerPoint will also be included. Topics include the fundamentals of creating databases and spreadsheets (e.g., mailing lists, inventory records, and grading systems), integrating blueprints and photo images, and how to use the Internet. The participant will develop relevant training materials and present the solutions at the end of the week. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6; IWT 131 or extensive experience with Microsoft Office

IWT 201 Working with Learners with Special Needs (1.5 Credits)

22.5 lecture, 1.5 total contact hours

The focus of this course is on the challenges created for apprenticeship instructors who work with learners with special needs in classroom and shop environments. Participants will become familiar with categories of special-needs learners and general characteristics (e.g., learning disabled, limited English speaking, substance abuse, emotional problems, and reading/math difficulties) as well as a menu of helpful instructional strategies. Information on learning styles and teaching styles will also be addressed. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 203 Bonded Post-Tensioning Ironworker Certification (1.5 Credits)

22.5 lecture, 1.5 total contact hours

In this course, students will receive instruction on the installation of bonded post-tensioning systems, including multi-strand and bar systems used in bridges, superstructures and buildings. New curriculum materials and instructors guide will be used and will encompass installation, stressing, and grouting procedures. Day three of the course will include hands-on training in the skill practice area, so participants should dress appropriately. At the conclusion of this course, a representative from the Post-Tensioning Institute (PTI) will administer the certification examination for bonded post-tensioning. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 204 Reinforcing Concrete for Your Apprenticeship Programs (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This "train-the-trainer" course uses dynamic teaching techniques to introduce the Reinforcing Concrete for Ironworkers training package available from the National Fund. This course will introduce the reference manual, student workbook, instructors guide, blueprints, and DVD that contain the latest information on concrete reinforcing materials, tools, and techniques. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 205 Foreman Training for Ironworkers (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course is designed to develop skilled Ironworker foremen. During this course, the participants will learn the roles and responsibilities of the foreman. In addition, they will learn how to create an effective work team, communicate effectively, apply problem-solving skills, document and maintain records, maintain labor-management relations, plan and schedule work, implement a safety program, and ensure the quality of work. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 207 Teaching the History of the Ironworkers Union (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course will enable the participants to teach the history of the Ironworkers Union as well as to discuss major events in American labor history. The evolution of construction technologies and the effect these changes had on our union will also be examined. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 208 Operating Layout Instruments (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course will provide the necessary skills to use layout equipment during the erection of all facets of the Ironworking trade (e.g., structural steel, precast concrete, curtain wall/window wall, metal buildings, and rebar). The course will consist of hands-on training using several different types of instruments. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 209 Ironworker COMET Train-the-Trainer (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course will enable the participants to deliver the Construction Organizing Membership Education Training (COMET) program for Ironworkers developed for the AFL-CIO Building and Construction Trades Department by Cornell University and the George Meany Center. COMET is an important prerequisite to an effective construction-organizing campaign in that it emphasizes membership awareness and enlists broad support for organizing activities. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 210 Approved MSHA Instructor Course (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course will provide the participants with a detailed presentation of the Federal Mine Safety & Health Administration's (MSHA) training requirements (CFR Title 30 Part 46, and Part 48) for personnel employed at mine facilities. It will introduce the participants to the training materials developed by the National Fund and MSHA, including an overview of a surface mine operation (conveyors, ball mills, crushers, etc.). Upon completion of the course, the participant's name will be submitted to the Department of Labor for approval as an instructor of Surface or Underground Mining Training. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6; Resume detailing teaching and work experience related to mining operation must be presented the first day of the course.; Submit current Red Cross (or equivalent) certification and the National Fund OSHA 500 Instructor card to the Safety Department according to due date stated in course catalog

IWT 211 Rigger Trainer Development Program (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This Rigger Trainer Development Program will cover fundamental and advanced rigging concepts with emphasis on proper rigging techniques per ASME (American Society of Mechanical Engineers), OSHA, and manufacturing recommendations. Each course session will incorporate both a classroom presentation as well as the opportunity to work in a workshop setting to solve various real-world rigging problems. Participants will be instructed on the new B30.26 "Rigging Hardware" standard that went into effect in 2006, and information will be shared on the B30.9 "Sling" update. Other topics discussed will be proper selection and application of blocks, plate clamps, steer erection standard, rigging math, and a computer tools workshop to make participants aware of the various Crosby Rigging CD-ROMs that may be used to educate others. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 212 Conveyor Installation and Industrial Maintenance (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course will provide the participant with an overview of the installation of and the theory behind various types of conveyor equipment used in the manufacturing sector. It will also cover the theory and practice behind industrial maintenance techniques on various mechanical installations in this sector. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 214 Structural Steel Erection (1.5 Credits)

22.5 lecture, 1.5 total contact hours

The objective of this course is to enable participants to build a structural steel erection program to meet the participants' needs with the goal of enhancing their overall work performance. Topics covered will be taken from the new structural training package with emphasis on general safe erection practices and procedures, tools and equipment, planning and scheduling, material handling, bolting up, and plumbing and aligning. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 217 National Welding Certification Program of North America (3 Credits)

22.5 lecture, 22.5 lab, 3 total contact hours

Using Miller and Smith Equipment, the participants will have the opportunity to test and inspect various National SMAW, FCAW, and GTAW welding procedures on plate and pipe. Upon successful completion of each test, the participant will receive a corresponding National Welder Certificate and identification card. GTAW and GMAW-P will be introduced on miscellaneous metals. Participants who are certified welders will learn advanced inverter technology, troubleshooting welding equipment and systems, and multi-process use of newer equipment. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 219 Certified Welding Inspector Recertification Course (4 Credits)

30 lecture, 30 lab, 4 total contact hours

This review course is designed to prepare previously certified welding inspector for their 9-year recertification examination. A representative of the American Welding Society will administer the required section of the CWI examination to participants on the final day of the course. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6; Previously certified as a CWI and requiring a 9-year recertification

IWT 220 New Seismic Requirements for Structural Steel (1.5 Credits)

22.5 lecture, 1.5 total contact hours

This course, presented by representatives of the Lincoln Electric Company, covers the latest seismic (earthquake) requirements for structural steel welding. The classroom and hands-on instruction focus primarily on the AWS D1.8 recommendations for FCAW welding: electrodes, qualification, design and fabrication. This course is recommended for areas with seismic requirements. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6

IWT 223 Ornamental Wall Coverings and Glass Railing (1.5 Credits)

10.5 lecture, 12 lab, 1.5 total contact hours

This course will focus on types and installation of curtain wall, window wall, storefronts, entrance ways and glass railing. In addition, storage, safe handling, application of caulking and installation of glass will be taught. A portion of this course will consist of hands-on training. Limited to Ironworker Instructor Training program participants. Level I Prerequisite: Academic Reading and Writing Levels of 6