

A photograph of a construction site. In the background, a yellow Caterpillar 312C L excavator is visible. In the foreground, several ironworkers wearing hard hats and safety gear are working on a large steel structure. The ground is dirt and there are various construction materials and equipment scattered around.

**IRONWORKERS LOCAL 25 TRAINING CENTER**

**APPRENTICESHIP AND  
JOURNEYMAN TRAINING**

**2012  
TRAINING CATALOG**

## INDEX

How to become an Apprentice.....	3
Apprentice Programs.....	4
National Welding Program.....	5
Raising Gang Training.....	6
Journeyman Course Description.....	7
Journeyman Course Schedule.....	9
Apprentice Class Roster.....	10
Apprentice Class Schedule.....	11
Apprentice Course Description.....	12
Useful Information.....	18



## IRON WORKERS – LOCAL 25 – TRAINING CENTER

### JOINTLY MANAGED BY:

- IRONWORKERS LOCAL NO. 25  
of the  
INTERNATIONAL ASSOCIATION OF  
BRIDGE, STRUCTURAL,  
ORNAMENTAL, AND REINFORCING  
IRONWORKERS

- GREAT LAKE FABRICATORS AND  
ERECTORS ASSOCIATION  
- MICHIGAN RESTEEL  
CONTRACTORS ASSOCIATION INC.  
- GREAT LAKES METAL BUILDING  
ERECTORS ASSOCIATION

### JOINT APPRENTICESHIP and TRAINING COMMITTEE MEMBERS

UNION  
JACK O'DONNELL/Chairman  
PAT BUCK  
DAVID GONZALEZ  
STEVEN GULICK  
MIKE MANSFIELD  
MIKE RANDICK  
JOE SIMPSON

ASSOCIATION  
WILLIAM TREHARNE/Secretary  
WILLIAM LIVINGSTON  
DON MAKINS  
TIM POWSER  
JOHN RICKHOFF  
DWAYNE WOODRUFF  
M.E. WOODBECK JR.

# HOW TO BECOME AN APPRENTICE IRONWORKER

Applications are accepted as needed. Application information will be posted on our website at [www.ironworkers25.org](http://www.ironworkers25.org).

## All Applicants must:

- Be physically capable of performing essential functions of the job
- Complete and turn in an application with supporting documentation
- Be at least 18 years old at the time of application
- Be a US citizen or legal alien actively seeking naturalization at the time of application
- Present a high school diploma or GED equivalency at the time of application
- Present a valid Driver's License at the time of application
- Present a Social Security card at the time of application
- Pass a drug screen and remain drug free
- Pass aptitude testing
- Pass a physical exam
- Rigging applicants must be eligible for their CDL license at the time of application

**(ALL DOCUMENTS MUST BE ORIGINALS)**

## EXPECTATIONS OF ALL APPRENTICES

- **To present yourself as a professional at all times. Dress for the job.**
- **To attend, on time, all scheduled school days as attendance is mandatory**
- **To meet all training requirements and assignments**
- **To report on time and ready for work, every day**
- **To perform all job tasks diligently and to the best of your ability**
- **To remain with an assigned contractor until laid off**
- **To remain drug free and current under the required testing program**
- **To remain alcohol free during any activities associated with the job or school**
- **To abide by all provisions of the Standards, Guidelines, and other policies of the program**

**APPLICATIONS,  
WILL BE POSTED AT  
[www.ironworkers25.org](http://www.ironworkers25.org)**

## APPRENTICESHIP PROGRAMS

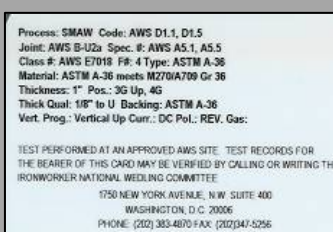
- **ARCHITECTURAL ORNAMENTAL IRONWORKER (3 YR)** – These Ironworkers install curtain wall, window systems, skylights, exterior composite panels, metal siding, metal roofs, louvers, clay tiles, entrance doors, overhead doors, specialty doors, and other architectural finish materials and systems.
- **FENCE ERECTOR (3 YR)** – Fence Erectors handle, layout and erect many different types of fences and barriers. These include but are not limited to, chain link fence systems, privacy, mesh, security, ornamental, gates, blast fence and sound wall. They also install highway guard rail and signage.
- **JOURNEYMAN IRONWORKER (4 YR)** – The journeyman Ironworker can perform all types of ironwork, but the vast majority of the work performed under this classification is structural ironwork. This includes unloading, fabrication, handling, erection, bolting, and welding of structural members. Work is primarily on industrial and commercial high and low rise buildings, towers, bridges, steel mills, hospitals, schools, stadiums and other structures. These Ironworkers also erect pre-cast concrete, install conveyor systems, and perform Industrial maintenance.
- **METAL BUILDING ERECTOR (3 YR)** – These specialized Ironworkers Erect Pre-Engineered Metal Buildings. These buildings are constructed of standardized components which make them all similar in construction. The scope of work includes erecting the structural steel framework, installing insulation, metal siding, metal roof system, install all trim, gutters and downspouts. All components of the metal building system are included.
- **REINFORCING IRONWORKER (3 YR)** – These specialized Ironworkers unload, handle, place, tie, and sometimes weld reinforcing steel. They install, stress and grout various Post Tensioning systems and place wire mesh. Reinforced concrete is used in all types of concrete construction including slabs, caissons, foundations, bridges, retaining walls, parking structures, wastewater treatment facilities, high and low rise buildings, and many other structures.
- **RIGGING AND MACHINERY MOVING IRONWORKER (3YR)** – Riggers load, unload, move, haul, and set machinery, equipment, and materials using power hoists, cranes, gantries, fork trucks, jacks, and other equipment. They use and have knowledge of fiber line, wire rope, skids, rollers, and proper hand signals. Riggers drive semi tractors and trailers, and all applicants must be eligible for a class A CDL.



# NATIONAL WELDING PROGRAM

Since becoming accredited in August of 2002 the welding program has proven to be an invaluable tool for our members and contractors. Since then we have processed over 4300 welding certifications for our members helping to ensure that we have certified welders ready to go. Being an accredited test facility has expedited the certification process as well as given us more credibility with the engineer and owner community. The procedures and quality assurance aspects have also secured accreditation with MDOT, giving our members certifications acceptance for non-structural welding on bridges in the state of Michigan. Features of the program include:

- CWI's on site to administer weld tests and answer questions concerning jobsite welding issues
- Tests processed on site
- Certification papers issued the same day (card will follow in the mail)
- Certification cards with id photo (see below)
- 77 different testing procedures for mild steel, stainless, and reinforcing steel
- Procedures for: SMAW, FCAW, GMAW, GTAW, and SAW
- Continuity log book for maintaining certifications without having to retest (see below)
- **There is no cost for the original certification or renewal as long as continuity is maintained.** If you have a certification through the National Welding Program and you let it expire after September 1, 2007, **there will be \$25 charge to recertify**



Certification Card (front and back)

Name: _____	Name: _____
Book #: _____	Book #: _____
First Six Months	Second Six Months
Employer's Name: _____	Employer's Name: _____
Address: _____	Address: _____
Telephone: (____) _____	Telephone: (____) _____
Supervisor Name: _____	Supervisor Name: _____
Type of Welding Performed: _____	Type of Welding Performed: _____
Process Used: _____	Process Used: _____
Employed from: _____ to _____	Employed from: _____ to _____
Signature: _____ Date: _____	Signature: _____ Date: _____
Check One: <input type="checkbox"/> CWI <input type="checkbox"/> Inspector <input type="checkbox"/> Supervisor	Check One: <input type="checkbox"/> CWI <input type="checkbox"/> Inspector <input type="checkbox"/> Supervisor

Continuity Log Book

## HOW TO USE YOUR LOG BOOK

When welding on the job, have the book filled out and signed (also stamped if by a CWI) verifying that you welded with the process certified in during the first six months, and the second six months following the date of initial certification or renewal. Copies of the continuity verifications must be forwarded to the National Welding Program within 30 days of expiration. **There is no charge to renew your certification.**



## Welder Certification Program

1750 New York Avenue NW • Suite 400 • Washington, DC  
 20006 • 202-383-4870 (phone) • 202-347-5256 (fax)  
 • [christine\\_vermillion@iwnf.org](mailto:christine_vermillion@iwnf.org) – [www.welderscertification.org](http://www.welderscertification.org)

## RAISING GANG TRAINING CLASS

### 2012 Raising Gang Training Schedule:

May 7-11, June 4-8, July 9-13, Aug. 13-17, Oct. 1-5

APPRENTICES, JOURNEYMAN, and ENGINEERS  
SIGN UP TODAY!

**General Contractors and Engineers – Do you wish your people had hands on experience in the field? Here is your chance, sign them up for this hands on steel erection course. Attendees will strap on a set of tools and spend the week hanging iron.**



**THIS COURSE IS A GRADUATION REQUIREMENT FOR ALL JIW  
AND MBE APPRENTICES**

This 40 hour course is open to all Apprentice and Journeyman members who are interested. Apprentices are free to attend at any time after their second period of training. **APPRENTICES TAKING THIS CLASS WILL GET 40 HOURS ADVANCED CREDIT TOWARD THEIR LAST WEEK OF SCHOOL** providing all other requirements are met.

# JOURNEYMAN TRAINING AND CERTIFICATIONS

**REGISTERING FOR COURSES** – Journeyman must call the Training Center to enroll in classes no later than 7 days prior to the first day of class. Journeyman may also attend scheduled apprentice classes as room allows. Special classes may be scheduled upon contractor request or if demand is adequate to schedule additional classes. All courses are free, but books or other required materials are the responsibility of the student. **If you sign up you are expected to attend.**

## JOURNEYMAN COURSE DESCRIPTIONS

**AAT 1 – Asbestos Awareness Training (2 hrs)** – This course will meet the OSHA/MIOSHA requirement for workers who may contact, but do not disturb asbestos containing material during their work activities. Topics will include asbestos usage and forms, health effects, and how to avoid exposure. Asbestos Awareness Certification will be issued.

**LTH 3 – Foreman Training (20 hrs)** – This course will be based on the “Foreman Training for Ironworkers” manual. Grade will be based on classroom attendance and participation.

**LTH 4 – COMET (Construction Organizing Membership Education Training) (8 hrs)** – This course will explore how to run an effective organizing campaign. It emphasizes membership awareness, and enlists broad support for organizing activities.

**FAC 1 – CPR (4 hrs)** – This 4 hour course will prepare you for the American Red Cross CPR certification test which will result in a 2 yr CPR certification.

**FAC 2 – First Aid (4 hrs)** – This 4 hour course will prepare you for the American Red Cross First Aid Certification test which will result in a 2 yr First Aid Certification.

**MSH 1 – MSHA 24 hr. New Miner (9 hrs – 27 hrs total)** – This training and certification is required for employees performing work on a surface mine site covered under Part 46 Mine. Sites include: cement plants, gravel pits, phosphate or surface limestone mines and includes work on conveyors, ball mills, crushers and new construction. The 27 hours of training consists of 9 hours of Mine Safety, 8 hours of FA/CPR and 10 hours of an OSHA 10 or 30 hour class. Previous OSHA 10/30 hour certifications and current FA/CPR will be credited with proof.

**MSH 2 – MSHA Refresher** – 8-hour yearly renewal course for MSHA Miner certification

**MWB 1 – Masonry Wall Bracing Requirements (2 hrs)** – This course will focus on MIOSHA Part 2 (Fed OSHA 29 C.F.R. 1926.706) and the bracing of unsupported masonry walls. Covered will be requirements for bracing, working in a restricted zone, proper signage, and hazards. Completion will result in certification of training completion for Masonry Wall Bracing as required by the standard.

**OSH 30 – OSHA 30 hr (30+ hrs)** – 30 hours of safety training on OSHA required and elective topics including all 18 topics for credit in the MUST system. Successful completers will receive a Department of Labor OSHA 30 hr card for construction safety and health.

**RIG 5 – Qualified Rigger/Crane Signaler (24 hrs)** – This course will meet the requirements of the qualified rigger as well as crane signaling. Topics covered include fiber line and knots, wire rope and slings, sling use and calculations, synthetic slings, rigging hardware, rigging tools, cranes, and signaling. Qualified Rigging and Crane Signaling certification cards will be issued to those who pass the tests.

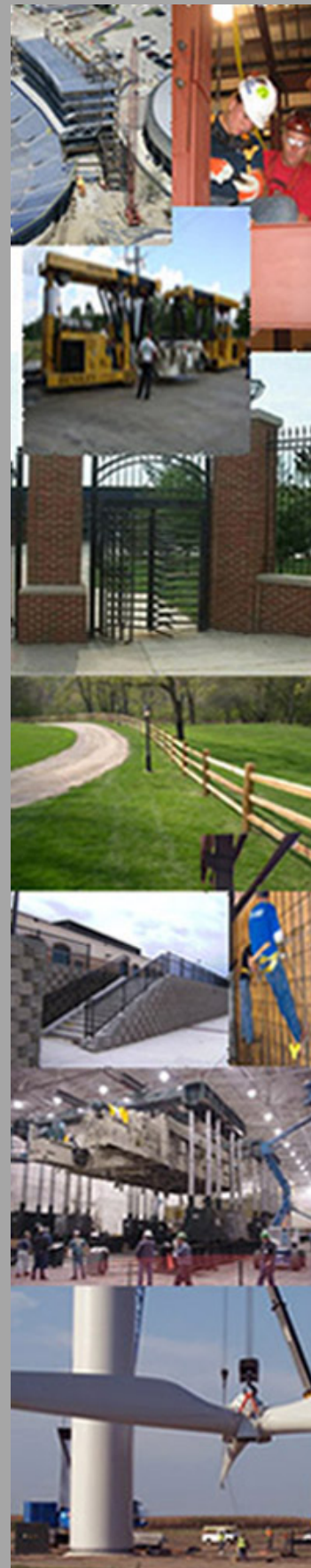
**SCA 1 – Scaffold Erectors & Dismantlers (16 hrs)** – Anyone who is erecting or dismantling scaffolding on the job is required by OSHA to have this training. Types of scaffolding will include: Frame scaffold, tube and clamp scaffold and swing stage suspended scaffolding. Scaffold certification may be equipment specific so employers will still be required to train workers on their equipment if different from what is used in class. Scaffold Erectors and Dismantlers certification cards will be issued upon course completion.

**SUBR 1 – Subpart R/MIOSHA Part 26 (8)** – This course covers the Steel erection standard in great detail with special training for multiple lift rigging, working in a CDZ, and connecting. Completing the course and passing the test with a minimum score of 70% will result in a Subpart R / Part 26 card training certification card.

**STR 4 – Raising Gang Training (40 hrs)** – This is the same course described under the Apprentice course descriptions. Any JIW wishing to attend this course must contact the Training Center to register.

**REF 4 – Un-bonded Post Tensioning Certification (40 hrs)** – This course is dedicated to un-bonded mono-strand post tensioning installation, stressing, blue prints and troubleshooting. Passing the certification test will result in either Level 1, or Level 2 un-bonded Post Tensioning certification. 40 hours of previous training in Reinforcing Steel is required to take this course.

**WEL C – Welding Practice and Certification** – Journeymen wishing to improve their welding skills, prepare for and take their certification test should call to enroll in these classes which are scheduled as needed. Journeymen whose skill level is sufficient to test can schedule time to do so either during the week or on designated Saturdays.



## 2012 JOURNEYMAN COURSE SCHEDULE

Class code	Name of Course	Dates of class	Time
<b>JANUARY 2012</b>			
REF 4	Unbonded PT	3-6	7-3:30 pm
SUB R	Subpart R	5	4-10pm
MSH 1	MSHA New Miner	7, 10, 17, 19	Sat and evenings
FAC 2	CPR Refresher	17	5-9 pm
FAC 1	First Aid	19	5-9 pm
RIG 5	Qualified Rigger	31 continued...	5-10 pm
<b>FEBRUARY 2012</b>			
RIG 5 ...continued	Qualified Rigger	2, 7, 9, 14	5-10 pm
LTH 4	COMET	25	7-3:30 pm
<b>MARCH 2012</b>			
OSH 30	OSHA 30 hour	6, 8, 13, 15, 20, 22	5-10pm
<b>APRIL 2012</b>			
MSH 1	MSHA new miner	10,12,17,19, 24, 26	5-10pm
MSH 2	MSHA refresher	10, 12	5-10 pm
OSH 10	OSHA 10 hr	17, 19	5-10 pm
FAC 1, FAC 2	CPR/FA	24, 26	5-9 pm
<b>MAY 2012</b>			
RIG 5	Qualified Rigger	1, 3, 8, 10, 15	5-10 pm
STR 4	Raising Gang	7-12	8-4 pm
<b>JUNE 2012</b>			
STR 4	Raising Gang	4-8	8-4 pm
RIG 5	Qualified Rigger	5, 7, 12, 14, 19	5-10 pm
<b>JULY 2012</b>			
STR 4	Raising Gang	9-13	8-4 pm
<b>AUGUST 2012</b>			
STR 4	Raising Gang	13-17	8-4 pm
RIG 5	Qualified Rigger	14, 16, 21, 23, 28	5-10 pm
<b>SEPTEMBER 2012</b>			
OSH 30	OSHA 30 hour	5, 6, 11, 13, 18, 20	5-10pm
<b>OCTOBER 2012</b>			
STR 4	Raising Gang	1-5	8-4 pm
MSH 1	MSHA new miner	9, 11, 16, 18, 23, 25	5-10pm
MSH 2	MSHA Refresher	9, 11	5-10 pm
OSH 10	OSHA 10 hr	16, 18	5-10 pm
FAC 1, FAC 2	CPR/FA	23, 25	5-9 pm
<b>NOVEMBER 2012</b>			
SCA 1	Scaffold E/D	15, 19, 20	5-10pm
<b>DECEMBER 2012</b>			
RIG 5	Qualified Rigger	4, 6, 11, 13, 18	5-10 pm

\*\* check [www.ironworkers25.com](http://www.ironworkers25.com) for most current schedule \*\*

# APPRENTICE CLASS ROSTERS

## A/O-D

Kapel, Kendra  
O'Donnell, Sean  
Wendell, Nick  
Whitmore, Tom

## RMM-A

Toner, Chad

## RMM-B

Sparrow, Dave

## A/O-E

Cox, Jeffery  
Farrell, Shawn  
Gering, Timothy  
Kennedy, Michael  
Moore, Robert  
Moorhouse, Daniel  
Rynberg, Adrian  
Swan, Michael

## RMM-C

Baker, Phillip  
Eichorn, Ryan  
Gasiorowski, Tyson  
Hughes, Daniel  
Kellams, Chris  
Kozlow, Allan  
Myers, Matt  
Scott Jr, James  
Wozniak, John  
Zoccoli, Vincent

## FE-A

Culhane, Brent  
Harris, Reginald  
Lafore, Dale  
Purdy, Andrew

## RMM-D

Cadreau, Michael  
Crews, Troy  
Erd, Branden  
Harris, Peter  
Hyatte, Ben  
Knight, Jeremiah  
Perry, Michael  
Rippe, James  
Sandy, Jason  
Williams, Ronald

## ROD-B

Pyrzewski, Todd

## Rod-C

Jordan, Donald  
Leach, Nathan  
Lewis, James  
Miller, Marc  
Simmonds, Brian  
Truscott, Daniel  
Vega, Albert

## Rod-D

Beni, Joseph  
Brock, Patrick  
Drinkert, Ben  
Fields, Roy  
Franta, Joseph  
Glenn, Trevor  
Hall, Jacob  
Harris, Steve  
Hubbell, Shaun  
Hurks, Elridge  
Kincaid, Garrad  
Lokken, Michael  
McDougal, Ryan  
McKone, Richard  
Oswald, Scott  
Reynolds, Wayne  
Robinson, Gene  
Schatzer, James  
Smith, Adam  
Templeton, Scott  
Wines, Kyle

## JIW-G

Bynum, Chad  
Dedivanaj, Tom  
Dusseau, Ben  
Fenner, Don  
Long, Dennis  
Marsden, Eric-LOA  
Wesolowski, Marc  
Whitt, Brandon  
Zoccoli, Dom

## JIW-I

Ameel, Gregory  
Bradley, John  
Cooper, Matt  
Coverdill, Adam  
Curtis, Tonia  
Dunn, Philip  
Feger, David  
Haight, David  
Hoare, Shawn  
Koslowski, Douglas  
Oliver, Grant  
Pica, Michael  
Reitmeyer, Patrick  
Savi, Nicholas  
Smith, Ryan  
Waldrop, Jeremy  
Weaver, Thomas  
Weber, Ryan

## JIW-H

DeBeau, Anthony  
Jakey, Dennis  
Krishke, Marc  
Lowry, Jeremiah  
Moyski, Matt  
Sendry, Charles  
Vogel, Matt

## JIW-J

Basney, David  
Bechard, Douglas  
Blumenthal, Collin  
Cook, David  
Kidd, Frederick  
Krajewski, Edward  
Lauwers, James  
McNeely, Demetrius  
Miller, Joshua  
Morgan, Anthony  
Moyski, Phillip  
Rebbe, William  
Stockdale, Jamie  
Tatomer, Damien  
Thomlison, Conan  
Thomlison, Ian  
Watkins, Jeffrey  
Watts, Richard  
Whelton, Russell

11/7/2011  
vjt/opeiu42aflcio

# APPRENTICE CLASS SCHEDULE

**CHECK [WWW.IRONWORKERS25.ORG](http://WWW.IRONWORKERS25.ORG) FOR THE MOST CURRENT APPRENTICE SCHEDULE**

## **APPRENTICE CERTIFICATIONS**

**Required by all Apprentices:** OSHA 30 hr, Aerial lift, Red Cross First Aid, Red Cross CPR, MUST Drug Screen, Hi-Lo Operator, Hydraulic Torqueing, Overhead Crane Operator, Powder actuated fasteners, Qualified Rigger, Qualified Crane Signaler, Scaffold Erector/Dismantler, Scaffold User, Subpart R/Part 26, Welding Certification, Masonry Wall Bracing.

**Specialty and Other Certifications Available:** CDL class A, Crosby Rigging Training, Un-bonded Post Tensioning, Bonded Post Tensioning, 70+ Welding certifications.

---

## **APPRENTICE TRAINING COURSE DESCRIPTIONS**

### **ARCHITECTURAL AND ORNAMENTAL**

**AO 1 – Glazing and Architectural window systems (50 hrs)** – This course will be based on Architectural and Ornamental Ironworking Units 1-7 covering curtain wall systems, window wall systems, sloped walls, skylights, erecting store fronts, entrance ways, glass rails, applying sealants, glazing systems, cable walls, and testing. Hands on will include the assembly of several different types of mock-ups from prints. Grade will be based on completion of written and performance assignments, and tests.

**AO 1B – Door Systems (50hrs)** – This course will cover the installation of different types of door systems, and anchors and Fasteners as detailed in Units 8-14 of the Architectural and Ornamental Ironworking manual. Grade will be based on completion of written and performance assignments, and tests

**AO 2 – Exterior Siding and Panels (50 hrs)** – This course will be based Unit 12 from the Structural manual, Units 6-8 of the Metal Building Manual and hands on training with several different mock up systems. Focus will be on correct installation of several different types of metal and composite wall panel systems including associated trim, and openings. Grade will be based on completion of written and performance assignments, and tests

### **FENCE**

**FNC 1 – Introduction to Fence (25 hrs)** – Fence manual unit topics will include: Safety, buried utility location (Miss Dig), Flagger certification, Tools, Fasteners and structural bolting, equipment, Layout and blueprints, and Skid Steer Operator Hazard awareness. Grade will be based on completion of written and performance assignments, and tests

**FNC 2 – Erecting Fence, Guardrail, Sound Barrier and Signs (35 hrs)** – Fence manual unit topics will include: Chain link, Security fence, Ornamental Fence, Gates Operators and Turnstiles, Cable and Traditional Guardrail Systems, Highway Sound Barrier, Signage, and reflectors. Grade will be based on completion of written and performance assignments, and tests.

### **LABOR AND TRADE HISTORY**

**LTH 1 – Labor History (10 hrs)** – The history of labor, and battles fought for workers rights, working conditions, and fair pay.

**LTH 2 – Survival of the Fittest (10 hrs)** – Based on the book by Mark Breslin, this class explores what we have to do as Union construction workers to survive, and regain the market share that we have lost.

**LTH 3 – Foreman Training (20 hrs)** – This course will be based on the “Foreman Training for Ironworkers” manual. Grade will be based on classroom attendance and participation.

**LTH 4 – COMET (8 hrs)** – Construction Organizing Membership Education Training. This course will explore how to run an effective organizing campaign. It emphasizes membership awareness, and enlists broad support for organizing activities.

### **MISCELLANEOUS COURSES**

**BP 1– Introduction to blueprints (20hrs)** – This is a basic blueprint course that will cover the different types of prints and their use, views, line types etc. This course will not go into detail with trade specific drawings. Grade will be based on completion of assignments and tests.

**CDL 1 – (10 hrs) – CDL Training** – This course will prepare students for the written test to be taken at any Secretary of State office. Included will be classroom and truck inspection/walk around. Passing the written tests and obtaining a permit are the objectives, and required for completion of this course.

**CIM 1 – Conveyor Installation and Industrial Maintenance (60 hrs)** – Based on the manual by the same name, topics include an introduction to the different types of conveyor systems, their use, terminology, components, erection, blue prints and Industrial maintenance. Grade will be based on completion of written and performance assignments, and tests

**LOI 1 – Layout Instruments (20hrs)** – This Course will cover the use and operation of instruments used for layout, including: layout tools, math, automatic levels, lasers, theodolites, transits, and total stations used for plumbing, aligning, squaring, and leveling. Instruction will be based on the manual “Layout Instruments for Ironworkers”. *Powder actuated fastener certification* will be included as part of this course. Grade will be based on completion of written and performance assignments, and tests

**MBE 1 – Metal Building Systems (76 hrs)** – Instruction will be based on the “Pre-Engineered Metal Building Systems” manual and includes: Primary framing, secondary framing, insulation, wall sheeting, metal roofing, flashing and trim, repairs, blue prints, and re-roofing. Hands on training will include: erection of a metal building, installation of insulation, siding, metal roofing, flashing and trim. Grade will be based on completion of written and performance assignments, and tests

**MTH 1 – Mathematics for Ironworkers 1 (12 hrs)** – Units 1, 2, and 3, in class lecture and examples followed by performance of sample problems and then homework. Grade will be based on completion of assignments and tests.

**MTH 2 – Mathematics for Ironworkers 2 (24 hrs)** – Units 4-7, in class lecture and examples followed by performance of sample problems and then homework. Unit 7 will be supplemented with additional info on reading a ruler/tape and precision measuring tools. Units 8 and 9 only as time allows. Grade will be based on completion of assignments and Unit tests.

### **ORIENTATION COURSES**

**ORI 1 – Job Orientation for JIW (30 hrs)** – Students will be given the very basic information, terminology and hands on experience that they will need their first days on the job. Information covered will be based on the Orientation manual with supplemental information to be given in class. **MUST** module orientation will be given, all modules will be required for completion of the first period, unless otherwise noted. Basic safety will be covered, including PPE, OH crane, hi-lo safety, fall protection, and suspension trauma with credit towards the OSHA 30 hr. Students will be given a list of minimum tools they will be required to have by the end of their first week of school.

Hands on basics will include: making up bolts, knots, choker use, crane signals, reinforcing ties, torch and welder set up, reading a tape measure, donning a harness, etc.

**ORI 1A – Job Orientation for A/O (30 hrs)** – The same basic description as ORI 1 plus scaffold users certification, all 18 MUST modules are to be completed prior to the first day of Apprenticeship school.

Hands on basics will include, use of a screw gun, use of a drill, knots, choker use, crane signals, reading a tape measure, donning a harness, etc.

**ORI 1F – Job Orientation for Fence Erectors (15hrs)** – The same basic description as ORI 1 with hands on basics specialized for Fence Erectors.

Specific training includes: basic knots, choker/sling use, crane signals, use of ratchet straps chains and binders, reading a tape measure, fence ties.

**ORI 1G – Job Orientation for Riggers (30 hrs)** – The same basic description as ORI 1 with hands on basics specialized for the Rigger.

Hands on basics will include: basic knots, choker use, crane signals, fork truck signals, use of ratchet straps, chains and binders, reading a tape measure, donning a harness, etc.

**ORI 1M – Job Orientation for MBE (30 hrs)** – The same basic description as ORI 1 with hands on basics specialized for Metal Buildings.

Hands on basics will include: making up bolts, basic knots, choker use, crane signals, torch, and welder set up, reading a tape measure, running a screw gun, donning a harness, etc.

**ORI 1R – Job Orientation for Reinforcing Ironworkers (30 hrs)** – The same basic description as ORI 1 with hands on basics specialized for the Rodbuster.

Hands on basics will include: basic ties, carrying and layout of re-steel, reading a tape measure, basic knots, choker use, crane signals, torch setup, donning a harness and positioning belt, etc.

**ORI – 2 Apprenticeship, Union, and Benefits (12 hrs)** – Review of approved standards, Rules, and signing of all paperwork. Trade Histories, lessons 1-9; assignments 1-9 will be done either in class or as homework, and then reviewed as a class.

## **REINFORCING COURSES**

**REF 1 – Introduction to reinforcing steel (36 hrs)** – This course will focus on chapters 1 – 9 of Reinforcing concrete for Ironworkers. Grade will be based on completion of written and performance assignments, and tests.

**REF 1F – Reinforcing for Sign Foundations (30)** – This course will be a basic introduction to placing reinforcing steel for small footings and piers. Instruction will be based on Units 2-10, 12, and 14 of the Reinforcing Manual. Grade will be based on completion of written and performance assignments, and tests.

**REF 2 – Reinforcing Steel blue prints, placing, & splicing (40 hrs)** – This course will focus on chapters 10-19 of the Reinforcing manual including reading and understanding re-steel prints and the placing and tying of re-steel in different types of structures i.e. mats, columns, beam slabs, and walls, splicing and coupling will also be covered. Grade will be based on completion of written and performance assignments, and tests.

**REF 3 – Re-steel Codes, Standard Practice, and Prints (20 hrs)** – this course will be based on ACI codes 318, ACI 117, AWS D1.4, and the CRSI Manual of Standard Practice. Additional print reading will also be covered. Grade will be based on a comprehensive open note test including all material covered.

**REF 4 – Un-bonded Post Tensioning (60 hrs)** – This course is dedicated to un-bonded mono-strand post tensioning installation, stressing, blue prints and troubleshooting. Passing the certification test will result in either Level 1, or Level 2 un-bonded Post Tensioning certification. Hands on placing of slab mock-ups will reinforce classroom training. Grade will be based on completion of assignments, hands on task proficiency, and certification exam score. **Certification is required for Reinforcing Apprentices.**

**REF 5 – Bonded Post Tensioning (20 hrs)** – This course will focus on bonded post tensioning systems only. Topics covered will include installation, stressing, grouting, and troubleshooting. Passing the certification test will result in either Level 1, or Level 2 bonded Post Tensioning certification. Grade will be based on completion of assignments, tests, and certification exam score. Un-bonded certification is a pre-requisite to this course.

## **RIGGING COURSES**

**RIG 1 – Basic Rigging (50 hrs)** – This course will cover the Rigging Manual including rigging hazards and safety, signals, calculations (estimating weights, calculating choker tensions), fiber ropes, wire rope, rigging hardware, slings, reeving, Hy-Torque certification will also be included. Grade will be based on completion of written and performance assignments, and tests

**RIG 2 – Cranes and other Rigging Equipment (30 hrs)** – This course will cover the different tools and devices used for rigging and their proper use, crane erection and use, fork Lift certification, tuggers, gantries, truck loading, load securing, and safety. Grade will be based on completion of written and performance assignments, and tests Special training and testing will qualify for Crane signaling certification. Completion of RIG 1, RIG 2, and Apprenticeship will meet requirements for Qualified Rigger certificate.

**RIG 3 – Crosby Rigging Certification (30 hrs)** – This course will follow the Crosby course in its entirety. Grade will be based on Completion of 16 interactive tests provided by Crosby. A Certificate of course completion will be issued by Crosby.

**RIG 4 – Machinery Moving, Hauling & Setting (50 hrs)** – This is an advanced rigging course that will focus on skills and knowledge having to do strictly with the rigging industry. Topics covered will include machinery moving, disconnecting power, disconnecting hydraulic and electrical lines, loading, hauling, unloading, setting, aligning, leveling, laser leveling, and grouting. Grade will be based on completion of performance assignments, and tests

**RIG 5 – Qualified Rigger and Signaler for Journeyman (24 hrs)** – This course will meet the requirements of the qualified rigger as well as crane signaling. Topics covered include fiber line and knots, wire rope and slings, sling use and calculations, synthetic slings, rigging hardware, rigging tools, cranes, and signaling. Qualified Rigging and Crane signaling certification cards will be issued to those who pass the written and performance tests on Rigging and Signaling and complete all required training.

## **SAFETY COURSES**

**AAT 1 – Asbestos Awareness Training (2 hrs)** – This course will meet the OSHA/MIOSHA requirement for workers who may contact, but do not disturb asbestos containing material during their work activities. Topics will include asbestos usage and forms, health effects, and how to avoid exposure. Asbestos Awareness Certification will be issued.

**FAC 1 – CPR (4 hrs)** – This 4 hour course will prepare you for the American Red Cross CPR certification test which will result in a 2 year CPR certification. Refresher course will be completed online outside of class.

**FAC 2 – First Aid (4 hrs)** – This 4 hour course will prepare you for the American Red Cross First Aid Certification test which will result in a 2 yr First Aid Certification. Refresher course will completed online outside of class.

**LED 1 – Lead Awareness Training (2 hrs)** – This course will meet the annual training requirements for employees needing training as set forth by OSHA and MIOSHA.

**MSH 1 – MSHA 24 hr. New Miner (9 hrs – 27 hrs total)** – This training and certification is required for employees performing work on a surface mine site covered under Part 46 Mine. Sites include: cement plants, gravel pits, phosphate or surface limestone mines and includes work on conveyors, ball mills, crushers and new construction. The 27 hours of training consists of 9 hours of Mine Safety, 8 hours of FA/CPR and 10 hours of an OSHA 10 or 30 hour class. Previous OSHA 10/30 hour certifications and current FA/CPR will be credited with proof. Completers will receive an MSHA 24 hour Certification.

**MSH 2 – MSHA Refresher (8 hrs)** – 8-hour yearly renewal course for MSHA Miner certification

**MWB 1 – Masonry Wall Bracing Requirements (2 hrs)** – This course will focus on MIOSHA Part 2 (Fed OSHA 29 C.F.R. 1926.706) and the bracing of unsupported masonry walls. Covered will be requirements for bracing, working in a restricted zone, proper signage, and hazards. Completion will result in certification of training completion for Masonry Wall bracing as required by the standard.

**OSH 10 – OSHA 10 hour (10 hrs)** – 10 hours of safety training on OSHA required and elective topics. Successful completion will result in a Department of Labor OSHA 10 hr card for construction safety and health.

**OSH 30 – OSHA 30 hour (30 hrs)** – 30 hours of safety training on OSHA required and elective topics including all 18 topics for credit in the MUST system. Successful completers will receive a Department of Labor OSHA 30 hr card for construction safety and health.

**SCA 1 – Scaffold Erectors & Dismantlers (16)** – Anyone who is erecting or dismantling scaffolding on the job is required by OSHA to have this training. Types of scaffolding will include: Frame scaffold, tube and clamp scaffold, and swing stage suspended scaffolding. Scaffold certification may be equipment specific so employers will still be required to train workers on their equipment if different from what is used in class. Scaffold Users and Erectors/Dismantlers certification cards will be issued upon course completion.

**SUBR 1 – Subpart R/MIOSHA Part 26 (8)** – This course covers the Steel erection standard in its entirety with special training for multiple lift rigging, working in a CDZ, and connecting. Completing the course and passing the test with a minimum score of 70% will result in a Subpart R / Part 26 card training certification card.

## **STRUCTURAL COURSES**

**STR 1 – Introduction to steel erection (20 hrs)** – This course will be based on chapters 1-5 of the Structural manual and topics such as: planning, safety, tools & equipment, prints, unloading, shaking out, and storing Iron, and AISC advanced erector certification check list items. Grade will be based on completion of written and performance assignments, and tests

**STR 2 – Erecting, Detailing, & Decking (60 hrs)** – Based on chapters 6-12, 19 of the Structural manual. Topics include: Erecting columns and beams, joists and trusses, plumbing and aligning, bolting (specifications for ASTM A325, and A490 high strength bolts will be covered), connections, and Decking. Classroom lecture reinforced with hands on assignments including erection of the skills frame, bar joist and decking mock up, Skidmore Wilhelm use, proper bolting procedure (TON, DTI will be performed by all students), and plumbing and aligning practice. Grade will be based on completion of written and performance assignments, and tests.

**STR 3 – Erecting Other Structures (20 hrs)** – Based on Chapters 13-18 of the Structural manual. Topics include: bridges, towers, wind turbines, clear span and modular structures, and amusement park structures. Grade will be based on completion of assignments, and tests.

**STR 4 – Raising Gang Training (40 hrs)** – This is a week long course held at the Operators Training Center in Howell and it is conducted jointly with the Operators Instructors and Students. This is a hands on real life training program where you will erect a 50'x75'x60' high structure using a Manitowoc 111 Crane. Ironworker attendees will learn crane safety and set up from the Operators, and how to erect steel safely within the guidelines of subpart R / Part 26. Attendees will spend one day in each position as hook-on man, Connector, and foreman. This is a mandatory class for all JIW and MBE apprentices and may be taken in advance any time after STR 1, or MBE 1 counting for one week of school attendance in the final period. Grade will be based on participation and proficiency in each of the areas listed.

**STR 5 – Pre-Cast Concrete (20 hrs)** – This course is based on the “Pre-Cast Concrete Manual for Ironworkers” Units 1-4, and Safety Series Module 9. Topics will include proper rigging/handling, safety, and erection procedures associated with pre-cast concrete erection. Grade will be based on completion of assignments and Unit tests.

## **WELDING COURSES**

**NOTE: Students will be required to pursue as many welding certifications as time allows i.e. SMAW, FCAW, Stainless, 6GR etc. Each program has a welding requirement that must be met in order to qualify for period completion and maintained for graduation.**

**WEL 1 – Introduction to Cutting & Welding (20 hrs)** – This course will be based on the Manuals “Introduction to Welding”, “Oxy-fuel Gas Cutting and Welding”, and other supplemental material. Oxy-Acetylene cutting and safety beginning in the classroom followed by completion of hands on assignments. Introduction to welding will be followed by beginning of welding assignments. Grade will be based on completion of written and performance assignments, and tests

**WEL 2 –Welding theory & certification (120)** – Classroom instruction is based on “Shielded Metal Arc Welding”, and other materials for Discontinuities, Welding symbols, Details, Procedures, Special issues, Codes, Qualifications, Inspections, and FEMA requirements. Welding assignments will continue from welding 1 followed by taking and passing the SMAW certification tests. Grade will be based on completion of welding assignments, Certification, and tests scores. Reinforcing classes will also cover Stud Welding as part of this course.

**WEL 3 – Fabrication & Other processes (35 hrs)** – Basic information will be given on layout and fabrication, Carbon Arc Cutting, FCAW, Stud Welding, and Plasma cutting. Hands on assignments will be given and must be satisfactorily completed. Deck welding certification will be required by all students. Grade will be based on completion of hands on assignments.

**WEL C – Welding Certification** – Journeymen wishing to improve their welding skills, prepare for and take their certification test should call to enroll in these classes which are scheduled during the week or on Saturdays as needed. Journeymen whose skill level is sufficient to test can schedule time to do so on available days.



---

## CONTACT AND WEBSITE INFO

**MUST safety training and drug screen - [www.mustonline.org](http://www.mustonline.org)**

**21353 Bridge St., Southfield 48033  
248-352-9810**

**Training Center      50490 W Pontiac Tr., Wixom 48393  
248-960-2130            248-960-0980**

**Novi Union Hall      PO Box 965, Novi 48376-0965  
248-344-9494            248-344-4851**

**Flint Hall              3115 Joyce, Burton 48529  
810-742-3820            810-742-5380**

**Lansing Hall          5405 S Martin Luther King Blvd, Lansing 48911  
517-882-3078            517-882-2655**

**Saginaw Hall          811 Bridgeview South, Saginaw 48604  
989-755-9091            989-755-1434**

**Fund Office            PO Box 8006, Novi 48376-8006  
248-347-3100            248-347-4760**

**Credit Union          PO Box 164, Novi 48376-0164-(CLOSED MONDAYS)  
248-344-2560            248-344-4316**

**National Welding Program  
1750 New York Ave N.W. Suite 400, Washington DC 20006  
202-383-4870**

**MIOSHA                7150 Harris Dr. PO Box 30643, Lansing 48909  
517-322-1809**

**Websites              Local 25 – [www.ironworkers25.org](http://www.ironworkers25.org)  
Fringe Fund – [www.iw25fringe.org](http://www.iw25fringe.org)**

**Online Training Websites – OSHA 10 and 30 hour, Qualified Rigger, etc.**

[www.mustondemand.puresafety.com/ondemand/home](http://www.mustondemand.puresafety.com/ondemand/home)

[www.careersafeonline.com](http://www.careersafeonline.com)

[www.advanceonline.com](http://www.advanceonline.com)

[www.regionxoti.org](http://www.regionxoti.org)

[www.clicksafety.com](http://www.clicksafety.com)

[www.safetyontheweb.com](http://www.safetyontheweb.com)

<http://www.osha30hourtraining.com/>

[www.osha30.com](http://www.osha30.com)

[www.oshacampus.com](http://www.oshacampus.com)

[www.operatornetwork.com](http://www.operatornetwork.com)

**MSHA – [www.eduwhere.com](http://www.eduwhere.com)**