

# Washtenaw Community College Comprehensive Report

## IWT 203 Bonded Post-Tensioning Ironworker Certification Conditional Approval Effective Term: Fall 2011

### Course Cover

**Division:** Vocational Technologies

**Department:** United Association Department

**Discipline:** Ironworker Instructor Training

**Course Number:** 203

**Org Number:** 28700

**Full Course Title:** Bonded Post-Tensioning Ironworker Certification

**Transcript Title:** Bonded Post-Tensioning

**Is Consultation with other department(s) required:** No

**Publish in the Following:** College Catalog , Web Page

**Reason for Submission:** New Course

**Change Information:**

**Rationale:** This course is part of the Ironworker ITP.

**Proposed Start Semester:** Fall 2011

**Course Description:**

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.

### Course Credit Hours

**Variable hours:** No

**Credits:** 1.5

**The following Lecture Hour fields are not divisible by 15: Student Min ,Instructor Min**

**Lecture Hours: Instructor: 22.5 Student: 22.5**

**Lab: Instructor: 0 Student: 0**

**Clinical: Instructor: 0 Student: 0**

**Total Contact Hours: Instructor: 22.5 Student: 22.5**

**Repeatable for Credit:** NO

**Grading Methods:** Letter Grades

**Audit**

**Are lectures, labs, or clinicals offered as separate sections?:** NO (same sections)

### College-Level Reading and Writing

College-level Reading & Writing

### College-Level Math

### Requisites

### General Education

## Degree Attributes

Below College Level Pre-Reqs

## Request Course Transfer

Proposed For:

## Student Learning Outcomes

1. Set up and demonstrate bonded post-tensioning systems.

### **Assessment 1**

**Assessment Tool:** Survey of Ironworker training coordinators/supervisors.

**Assessment Date:** Fall 2012

**Assessment Cycle:** Every Two Years

**Course section(s)/other population:** All

**Number students to be assessed:** Random sampling of 50% of all students teaching related topics the subsequent year.

**How the assessment will be scored:** The student's training activities at the home local will be scored and evaluated on a survey questionnaire covering the learning outcomes.

**Standard of success to be used for this assessment:** Based on the number of students who teach the related material in the subsequent year, 75% will score an average of satisfactory or better.

**Who will score and analyze the data:** The UA Program Administrator will coordinate the collection of data with the Ironworker Training Department and will discuss the results with the Ironworker Training Department and IWT faculty.

2. Deliver safety and bonded post-tensioning systems in related lecture material.

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3. Effectively use the Ironworker and vendor training materials.

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students who teach the related material in the subsequent year, 75% will score an average of satisfactory or better.

**Who will score and analyze the data:** The UA Program Administrator will coordinate the collection of data with the Ironworker Training Department and will discuss the results with the Ironworker Training Department and IWT faculty.

4. Pass the Bonded Post-Tensioning Ironworker Certification exam.

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**Course Objectives**

1. Set up and demonstrate multi-strand and bar post-tensioning systems used in bridges, super structures, and buildings.

**Methods of Evaluation**  
**Matched Outcomes**

2. Set up and demonstrate installation, stressing, and grouting procedures used in bonded post-tensioning systems.

**Methods of Evaluation**  
**Matched Outcomes**

3. Explain safety precautions and regulations that apply to multi-strand bonded post-tensioning systems.

**Methods of Evaluation**  
**Matched Outcomes**

4. Describe the components used in multi-strand bonded post-tensioning processes.

**Methods of Evaluation**  
**Matched Outcomes**

5. Identify the step-by-step procedures used in the installation of multi-strand bonded post-tensioning systems.

**Methods of Evaluation**

## Matched Outcomes

6. Reference Ironworker, Post-Tensioning Institute, and vendor supplied materials during lectures and demonstrations.

### Methods of Evaluation Matched Outcomes

7. Apply Ironworker, Post-Tensioning Institute, and vendor training material guidelines and concepts to multi-strand bonded post-tensioning systems.

### Methods of Evaluation Matched Outcomes

8. Complete, with a passing score, the Bonded Post-Tensioning Ironworker Certification exam administered by a representative from the Post-Tensioning Institute.

### Methods of Evaluation Matched Outcomes

9. Describe how to teach bonded post-tensioning guidelines and processes to apprentices.

### Methods of Evaluation Matched Outcomes

## New Resources for Course

All required materials provided by the Ironworker Training Department.

## Course Textbooks/Resources

Textbooks  
Manuals  
Periodicals  
Software

## Equipment/Facilities

Level III classroom

### Reviewer

**Faculty Preparer:**

**Department Chair/Area Director:**  
*Daniel Welch*

**Dean:** *Daniel Welch*

**Vice President for Instruction:** *Stuart Blacklaw*

### Action

*Faculty Preparer*

*Recommend Approval*

*Request Conditional Approval*

*Conditional Approval*

### Date

*May 05,  
2011*

*May 05,  
2011*

*May 05,  
2011*

*May 06,  
2011*