



Merit Shop Training, Inc.  
P. O. Drawer 2650  
Freeport, Texas 77542

Phone: (979) 233-1616  
Fax: (979) 239-4386  
Email: [tcravey@abctxgulfcoast.org](mailto:tcravey@abctxgulfcoast.org)

# Craft Training Course Outlines

ACCREDITED SPONSOR



## Explanation of Module Numbers

Example: 08304-07  
08= Craft (pipefitting).  
3=level 3  
04= Content (Trade Math)  
07= published 2007

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**Theresa Cravey**  
Director of Education  
Associated Builders and Contractors, Inc.,  
Texas Gulf Coast Chapter  
& Merit Shop Training, Inc.

# Introduction

This booklet lists the Merit Shop Training, Inc. Craft Training Program certificate requirements and course outlines as offered through MSTI's primary training unit, Brazosport College.

MSTI offers the following training opportunities for the craft worker:

## **Formal Craft Training**

The Craft Training Program is a competency based training program designed to prepare individuals for occupations in skilled crafts. A trainee commits to training and follows a structured course outline. They may move through the program at an accelerated pace based on their capabilities, rather than being tied to a strict time requirement. This training is a combination of classroom and laboratory, with a structured course outline, and the job training (OJT), under the guidance of a journeyman. Upon successful completion of all required courses, along with sponsorship by an ABC member, individuals are issued an MSTI "Certificate of Completion".

## **Advanced Journeyman Upgrade Training**

Advanced Upgrade Journeyman Training is designed for the craft worker who is working as a craftsman and would like to take a craft class to advance and improve him or herself.

## **Module Training**

Module Training is designed for craftsmen desiring to take specific NCCER Modules as prescribed by the NCCER Skills Assessments. There are several ways this can be designed. For additional information, please contact any ABC member's training director or the MSTI Director of Education.

Merit Shop Training, Inc. is the educational affiliate of Associated Builders and Contractors, Inc., Texas Gulf Coast Chapter.

Please direct any questions about the MSTI Craft Training Program to your employer training director or the MSTI Director of Education:

### **Theresa Cravey**

Associated Builders and Contractors  
& Merit Shop Training, Inc.  
Texas Gulf Coast Chapter  
1002 ABC Avenue \* P.O. Box 2650  
Freeport, TX 77542  
Phone: 979-233-1616

Email: Theresa Cravey (tcravey@abctxgulfcoast.org)

## COURSE REQUIREMENTS FOR NCCER CURRICULUM CLASSES

The **NCCER Curriculum** is a nationally recognized curriculum distributed by the National Center for Construction Education and Research (NCCER). As a NCCER “Accredited Training Sponsor” Merit Shop Training, Inc. offers the following courses utilizing this curriculum. Part of the curriculum is the “Core” or as it is referred to as “Construction Tools & Techniques”. Each of our **NCCER** course requirements includes the following:

### CNBT 1318 – Construction Tools & Techniques

Module	Title
00101-09	Basic Safety
00102-09	Introduction to Construction Math
00103-09	Introduction to Hand Tools
00104-09	Introduction to Power Tools
00105-09	Introduction to Construction Drawings
00106-09	Introduction to Basic Rigging (Elective Module, not required for Core completion)
00107-09	Basic Communication Skills
00108-09	Basic Employability Skills
00109-09	Introduction to Material Handling

NCCER CORE  
CSSO CERTIFICATION  
(with successful completion)

00101-09	Basic Safety
00102-09	Introduction to Construction Math
00103-09	Introduction to Hand Tools
00104-09	Introduction to Power Tools
00105-09	Introduction to Construction Drawings
00106-09	Introduction to Basic Rigging (Elective Module, not required for Core completion)
00107-09	Basic Communication Skills
00108-09	Basic Employability Skills
00109-09	Introduction to Material Handling

Upon successful completion of the required MSTI courses, along with sponsorship by an ABC member, individuals will receive a “Certificate of Completion” from NCCER in their respective craft. Individuals interested in a NCCER “Certificate of Completion” may pursue the remaining **NCCER** Modules by taking the additional courses listed under each craft.

MODULES NOT LISTED UNDER “ADDITIONAL COURSES” AVAILABLE ON REQUEST \*\*

## NON-NCCER LEARNING SERIES CRAFTS

Non-NCCER Learning Series Crafts do not utilize the NCCER curriculum. Course contents are approved by the MSTI Board.

Upon successful completion of the required courses in a craft, along with sponsorship by an ABC member, individuals will receive a “Certificate of Completion” from MSTI.

## NON-CRAFT RELATED CERTIFICATES

MSTI recognizes Construction Management and Safety, Health and Environmental Management courses at Brazosport College. For each course, we offer an MSTI “Certificate of Completion” upon successful completion of these courses.

## BRAZOSPORT COLLEGE COOPERTIVE EDUCATION

Cooperative Education is required as a part of most MSTI Craft Training Certificate Programs. Please refer to specific crafts below for the required number of Cooperative Education classes. The specific levels and order of levels taken are determined at the discretion of the program coordinator.

- |                                  |   |
|----------------------------------|---|
| ➤ Auto Mechanics                 | I, II, III  |
| ➤ Construction Management        | I, II   |
| ➤ Electrical                     | I, II, III  |
| ➤ Engineering Graphics & Design  | I, II, III  |
| ➤ Heating, AC & Refrigeration    | I, II, III  |
| ➤ Machine Tools                  | I, II, III  |
| ➤ Millwright                     | I, II, III  |
| ➤ Pipefitting                    | I, II, III  |
| ➤ Safety, Health & Environmental | I, II (listed as Internship)                                  |
| ➤ Welding                        | I, II, III (both 2-credit hours and 3-credit hours available) |

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**AUTOMOTIVE MECHANIC  
MSTI Craft Training Program  
Course Requirements**

**(Non-NCCER Course)**

**NOTE:** Same as Brazosport College Course Outline

AUMT 1405 – Intro to Automotive Tech

AUMT 1407 - Automotive Electrical Systems

AUMT 1416 – Suspension & Steering

AUMT 1410 – Automotive Brake Systems

AUMT 1345 - Automotive Heating and Air Conditioning

AUMT 2317 – Engine Performance Analysis I

AUMT 2434 – Automotive Engine Performance Analysis II

*AUMT 2313 is an approved substitution.*

**Cooperative Education Classes:**

AUMT 1380 – Cooperative Education I – Auto Technician

AUMT 1381 – Cooperative Education II – Auto Technician

AUMT 2380 – Cooperative Education III – Auto Technician

**CONSTRUCTION MANAGEMENT  
MSTI Craft Training Program  
Course Requirements**

**(Non-Craft Related Course)**

CNBT 1318 – Construction Tools & Techniques

<u>Module</u>	<u>PP</u>	<u>Title</u>
00101-15	✓	Basic Safety
00102-15		Introduction to Construction Math
00103-15	✓	Introduction To Hand Tools
00104-15	✓	Introduction To Power Tools
00105-15	✓	Introduction To Blueprints
00107-15	✓	Basic Communication Skills
00108-15		Basic Employability Skills
00109-15	✓	Introduction to Material Handling

**NCCER Core  
CSSO Certificate  
Project Management –Level 1**

CNBT 2342 – Construction Management I

<u>Module</u>	<u>PP</u>	<u>Title</u>
44101	✓	Introduction to Project Management
44102		Safety
44103	✓	Interpersonal Skills
44104		Issues and Resolutions
44105		Construction Documents
44106		Construction Planning
44107		Estimating and Cost Control
44108		Scheduling
44109	✓	Resource Control
44110		Quality Control and Assurance
44111		Continuous Improvement

CNBT 1311 - Construction Methods & Materials

CNBT 1346 – Construction Estimating I

CNBT 1359 – Project Scheduling

CNBT 2310 - Industrial/Commercial Blueprint Reading

CNBT 2344 – Construction Management II

OSHT 2309 – Program Management

Cooperative Education Classes:

CNBT 1380 – Cooperative Education I – Construction Technology

CNBT 1381 – Cooperative Education II – Construction Technology

❖ **ITSC 130I—Introduction to Computers**

CNBT 2335—Computer-Aided Construction Scheduling

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

# ELECTRICAL

## MSTI Craft Training Program

### Course Requirements

#### CNBT 1318 – Construction Tools & Techniques

Module	PP	Title
00101-15	✓	Basic Safety
00102-15		Introduction to Construction Math
00103-15	✓	Introduction To Hand Tools
00104-15	✓	Introduction To Power Tools
00105-15	✓	Introduction To Blueprints
00107-15	✓	Basic Communication Skills
00108-15		Basic Employability Skills
00109-15	✓	Introduction to Material Handling

**NCCER Core  
CSSO Certificate  
Level 1 Certificate**

#### ELPT 1321 – Intro to Electrical Safety & Tools

Module	PP	Title
26501-15		Managing Electrical Hazards

#### ELPT 1319 – Fundamentals of Elect. I

Module	PP	Title
26101-17	--	Orientation to the Electrical Trade
26102-17	✓	Electrical Safety
26103-17	--	Intro to Electrical Circuits
26104-17	--	Electrical Theory
26107-17	✓	Hand Bending
26112-17	✓	Electrical Test Equipment

Level 2 Modules not offered:

26203  
26210  
26211

Level 3 Modules not offered:

26301  
26303  
26308  
26309  
26310

Level 4 Modules not offered

26401  
26402  
26403  
26405  
26408  
26409

#### ELPT 1329 – Residential Wiring

Module	PP	Title
26105-17	✓	Introduction to the NEC
26106-17	✓	Device Boxes
26108-17	✓	Raceways & Fittings
26109-17	✓	Conductors & Cables
26110-17	✓	Basic Electrical Construction Drawings
26111-17	✓	Residential Electrical Services ELTN 1380 Coop I

#### ELPT 1345 – Commercial Wiring

Module	PP	Title
26204-17	✓	Conduit Bending
26205-17	✓	Pull and Junction Boxes
26206-17	✓	Conductor Installations
26207-17	✓	Cable Tray
26208-17	✓	Conductor Terminations & Splices

ELPT 1357 – Industrial Wiring

<u>Module</u>	<u>PP</u>	<u>Title</u>
26201-17	√	Alternating Current
26202-17	√	Motors: Theory & Application
26209-17	√	Grounding & Bonding

ELPT 1341 – Motor Control

<u>Module</u>	<u>PP</u>	<u>Title</u>
26407-17	--	Advanced Controls
26311-17	√	Motor Controls

ELPT 2305 – Motors & Transformers

<u>Module</u>	<u>PP</u>	<u>Title</u>
26307-17	--	Transformers
26309-17		Motor Calculations
26406-17	√	Specialty Transformers
26410-17	--	Motor Operations & Maintenance ELTN 2380 Coop III

ELPT 2301 – Journeyman Electrician Exam Review

ELPT 2339 – Electrical Power Distribution

26306-17		Distribution Equipment
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•ELTN 1343 – Electrical Troubleshooting

<u>•Module</u>	<u>PP</u>	<u>Title</u>
•26302-17		Conductor Selections & Calculations
•26304-17	√	Hazardous Locations
•26305-17		Over Current Protection
•26409-17	√	Heat Tracing and Freeze Protection

Cooperative Education Classes:

ELTN 1380 – Cooperative Education I – Electricity

ELTN 1381 – Cooperative Education II – Electricity

ELTN 2380 – Cooperative Education III – Electricity

\*\*\*\*\*End Of MSTI Program\*\*\*\*\*

Technical Courses in the Associates of Applied Science Degree:

ELPT 2319 – Programmable Logic Controllers I

<u>Module</u>	<u>PP</u>	<u>Title</u>
26404-17	√	Basic Electronic Theory

ELPT 2337 – Electrical Planning & Estimating

ELPT 2347-Electrical Testing and Maintenance

ELTN 1313 – Electrical Troubleshooting



**DRAFTING TECHNOLOGY  
MSTI Craft Training Program  
Course Requirements**

**(Non-NCCER course)**

***NOTE:*** Same as Brazosport College Course Outline

DFTG 1325 – Blueprint Reading and Sketching

DFTG 1305 – Technical Drafting

DFTG 1309 – Basic CAD

DFTG 2319 – Intermediate CAD

DFTG 1317 – Architectural Drafting – Residential

DFTG 2302 – Machine Drafting

DFTG 2323 – Pipe Drafting

DFTG 2332 – Advanced Computer Aided Drafting

DFTG 1358 – Electrical/Electronic Draft

ARCE 1352 – Structural Drafting

**Electives:**

DFTG 2328 – Architectural Drafting

DFTG 2345 – Advanced Pipe Drafting

**Cooperative Education Classes:**

DFTG 1380 – Cooperative Education I – Drafting

DFTG 1381 – Cooperative Education II – Drafting

DFTG 2380 – Cooperative Education III - Drafting

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

**HEATING, AIR CONDITIONING & REFRIGERATION  
MSTI Craft Training Program  
Course Requirements**

**NCCER Core  
CSSO Certificate  
Level 1**

CNBT 1318 – Construction Tools & Techniques

<u>Module</u>	<u>PP</u>	<u>Title</u>
00101-15	✓	Basic Safety
00102-15		Introduction to Construction Math
00103-15	✓	Introduction To Hand Tools
00104-15	✓	Introduction To Power Tools
00105-15	✓	Introduction To Blueprints
00107-15	✓	Basic Communication Skills
00108-15		Basic Employability Skills
00109-15	✓	Introduction to Material Handling

HART 1410 – Shop Practices and Tools

<u>Module</u>	<u>PP</u>	<u>Title</u>
03103-13	✓	Copper and Plastic Piping Practices (Level 1 Module 7)
03104-13	✓	Soldering and Brazing (Level 1 Module 8)
03105-13	✓	Basic Carbon Steel Piping Practices (Level 1 Module 9)
03102-13	--	Trade Mathematics (Level 1 Module 2)

HART 1407 – Refrigeration Principles

<u>Module</u>	<u>PP</u>	<u>Title</u>
03101-13	--	Introduction to HVAC (Level 1 Module 1)
03107-13	✓	Introduction to Cooling (Level 1 Module 5)
03109-13	✓	Introduction to Air Distribution System (Level 1 Module 6)
03205-13	✓	Leak Detection, Evacuation, Recovery, and Charging

2 level: missing  
03215  
Level 3 missing:  
035310  
Level 4 missing  
03401

HART 1401 – Electricity Principles

<u>Module</u>	<u>PP</u>	<u>Title</u>
03106-13	✓	Basic Electricity (Level 1 Module 3)
03206-13	✓	Alternating Current (Level 2 Module 1)

HART 1403 – Air Conditioning Control Principles

<u>Module</u>	<u>PP</u>	<u>Title</u>
03314-13	✓	Control Circuit and Motor Troubleshooting (Level 3 Module 2)
03405-13	✓	Building Management Systems (Level 4 Module 4)

HART 1441 – Residential Air Conditioning

<u>Module</u>	<u>PP</u>	<u>Title</u>
03210-13	✓	Troubleshooting Cooling (Level 3 Module 3)
03303-13	✓	Metering Devices (Level 2 Module 5)
03302-13	✓	Compressors (Level 2 Module 2)

HART 1445 – Gas & Electric Heating

<u>Module</u>	<u>PP</u>	<u>Title</u>
03108-13	✓	Introduction to Heating (Level 1 Module 4)
03202-13	--	Chimneys, Vents and Flues (Level 2 Module 8)
03209-13	✓	Troubleshooting Gas Heating (Level 3 Module 5)

HART 2445 – Air Conditioning Systems Design

<u>Module</u>	<u>PP</u>	<u>Title</u>
03312-13	√	Troubleshooting Accessories (Level 3 Module 7)
03407-13	√	Heating and Cooling System Design (Level 4 Module 8)

HART 2449 – Heat Pumps

<u>Module</u>	<u>PP</u>	<u>Title</u>
03211-13	√	Heat Pumps (Level 2 Module 6)
03311-13	√	Troubleshooting Heat Pumps (Level 3 Module 4)
03403-13	√	Indoor Air Quality (Level 4 Module 2)

Cooperative Education Classes

HART 1380 – Cooperative Education I – Heating, A/C and Refrigeration

HART 1381 - Cooperative Education II – Heating, A/C and Refrigeration

HART 2380 - Cooperative Education III – Heating, A/C and Refrigeration

Additional Modules Available:

03215-13	√	Basic Maintenance (Level 2 Module 7)
03310-13	√	Troubleshooting Oil Heating (Level 3 Module 6)
03401-13	√	Construction Drawings and Specifications (Level 4 Module 7)

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

Technical Courses in the Associates of Applied Science Degree:

HART 2441 – Commercial Air Conditioning

<u>Module</u>	<u>PP</u>	<u>Title</u>
03305-13	√	Commercial Hydronic Systems (Level 3 Module 9)
03306-13	√	Steam Systems (Level 3 Module 10)
03308-13	√	Water Treatment (Level 4 Module 1)
03406-13	√	System Start-up and Shutdown (Level 4 Module 6)

HART 2442 – Commercial Refrigeration

<u>Module</u>	<u>PP</u>	<u>Title</u>
03408-13	√	Commercial and Industrial Refrigeration System (Level 4 Module 9)

**INSTRUMENTATION**  
**MSTI Craft Training Program**  
**Course Requirements**  
**(Non-NCCER Course except ELPT 2319)**

**Instrumentation and Electrical (I & E) Certificate**

INTC 1401-Principles of Industrial Measurements

INTC 1315-Final Control Elements

INTC 1457-AC/DC Motor Control

ELPT 2319-Programmable Logic Controllers I

<u>Module</u>	<u>PP</u>	<u>Title</u>
26404-14	√	Basic Electronic Theory

INTC 1291-Test Equipment Review

INTC 1441-Principles of Automatic Control

INTC 2410-Principles of Industrial Measurements II

INTC 1343-Application of Industrial Automatic Control

INTC 2333-Instrumentation and Installation

INTC 2330-Troubleshooting

**INSTRUMENT TECHNICIAN\* (Must also take above classes, or test out of them)**

INTC 1315-Final Control Elements

INTW 1325-Fundamentals of Networking Technologies

INTC 1343-Application of Industrial Automatic Control

INTC 1457<sup>1</sup>-AC/DC Motor Control

INTC 2410-Principles of Industrial Measurements II

INTC 2359-Distributed Control Systems

INTC 2330-Troubleshooting

ELPT 2319-Programmable Logic Controller I

INTC 2333-Instrumentation and Installation

<sup>1</sup> An automatic degree substitution for INTC 1457 will be processed for those students who have completed both ELPT 1419 or ELPT 1319 and ELPT 1341.

**MACHINE TOOLS  
MSTI Craft Training Program  
Course Requirements**

**(Non-NCCER Course)**

MCHN 1302 - Print Reading for Machining Trades

MCHN 1338 – Basic Machine Shop I

MCHN 1341 – Basic Machine Shop II

MCHN 1343 – Machine Shop Math

MCHN 1352 – Intermediate Machine Shop I

MCHN 1354 – Intermediate Machine Shop II

MCHN 2341 – Advanced Machining I

MCHN 2345 – Advanced Machining II

**Four (4) Electives:**

**Refer to Brazosport College Course Catalog for list of approved electives.**

Cooperative Education Classes:

MCHN 1380 – Cooperative Education I – Machine Technologist

MCHN 1381 – Cooperative Education II – Machine Technologist

MCHN 2380 – Cooperative Education III – Machine Technologist

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

**MILLWRIGHT  
MSTI Craft Training Program  
Course Requirements**

CNBT 1318 – Construction Tools & Techniques\* or MCHN 1391 Intro to Machine Technology

MCHN 1391 – Intro to Machine Technology

<u>Module</u>	<u>PP</u>	<u>Title</u>
00101-15	✓	Basic Safety
00102-15		Introduction to Construction Math
00103-15	✓	Introduction To Hand Tools
00104-15	✓	Introduction To Power Tools
00105-15	✓	Introduction To Blueprints
00107-15	✓	Basic Communication Skills
00108-15		Basic Employability Skills
00109-15	✓	Introduction to Material Handling

**NCCER Core  
CSSO Certificate  
Level 1**

MCHN 1325 - Millwright I

<u>Module</u>	<u>PP</u>	<u>Title</u>
15101-06	--	Introduction to the Trade
15102-06	✓	Millwright Hand Tools
15103-06	✓	Fasteners & Anchors
15104-06	✓	Basic Layout
15105-06	✓	Gaskets and O-rings
15106-06	✓	Oxyfuel Cutting

MCHN 1329 - Millwright II

<u>Module</u>	<u>PP</u>	<u>Title</u>
15201-07	--	Intermediate Trade Math
15204-07	✓	Specialty Tools
15205-07	✓	Millwright Power Tools
15302-08	✓	Precision Measuring Tools
15303-08	✓	Installing Packing

MCHN 2305 - Millwright III

<u>Module</u>	<u>PP</u>	<u>Title</u>
15209-07	✓	Introduction to Bearings
15304-08	✓	Installing Seals
15305-08	✓	Installing Mechanical Seals
15306-08	✓	Removing an Installing Bearings
15307-08	✓	Couplings

MCHN 2307 - Millwright IV

<u>Module</u>	<u>PP</u>	<u>Title</u>
15202-07	✓	Field Sketching
15206-07	✓	Rigging
15208-07	✓	Lubrication
15404-08	✓	Pumps
15405-08	✓	Troubleshooting and Repairing Pumps

MCHN 2312 - Millwright V

<u>Module</u>	<u>PP</u>	<u>Title</u>
15207-07	√	Setting Baseplates & Soleplates
15503-09	√	Advanced Blueprint Reading
15311-08	√	Installing Chain Drives and Belt
15411-08	√	Troubleshooting and Repairing Gearboxes
15301-08	√	Advanced Trade Math

MCHN 2314 - Millwright VI

<u>Module</u>	<u>PP</u>	<u>Title</u>
15310-08	√	Pre-alignment for Equipment Installation
15312-08	√	Installing Fans & Blowers
15401-08	√	Conveyors
15402-08	√	Troubleshooting and Repairing Conveyors
15406-08	√	Compressors & Compressor Maintenance

MCHN 2316 - Millwright VII

<u>Module</u>	<u>PP</u>	<u>Title</u>
15308-08	√	Fabricating Shims
15409-08	√	Basic Hydraulic Systems
15505-09	---	Turbines
15506-09	√	Troubleshooting and Repairing Turbine Equipment
15508-09	---	Preventive and Predictive Maintenance

MCHN 2318 - Millwright VIII

<u>Module</u>	<u>PP</u>	<u>Title</u>
15403-08	√	Conventional Alignment
15501-09	√	Reverse Alignment
15502-09	√	Laser Alignment
15507-09	√	Installation of Motors
15509-09	---	Vibration Analysis

**Four (4) Electives:**

**Refer to Brazosport College Course Catalog for list of approved electives.**

Cooperative Education Classes:

MCHN 1380 – Cooperative Education I – Machine Technologist

MCHN 1381 – Cooperative Education II – Machine Technologist

MCHN 2380 – Cooperative Education III – Machine Technologist

**Modules Available on Special Request**

<u>Module</u>	<u>Title</u>
15203-07	Intermediate Blueprint Reading
15304-08	Installing Seals
15309-08	Alignment Fixtures and Specialty Jigs
15407-08	Basic Pneumatic Systems
15408-08	Troubleshooting and Repairing Pneumatic Equipment
15410-08	Troubleshooting & Repairing Hydraulic Equipment
15503-09	Advanced Blueprint Reading
15504-09	Optical Alignment

\*\*\*\*\*End of MSTI Program\*\*\*\*\*  
**PIPEFITTING**  
**MSTI Craft Training Program**  
**Course Requirements**

CNBT 1318 – Construction tools & Techniques\*

Module	PP	Title
00101-15	✓	Basic Safety
00102-15		Introduction to Construction Math
00103-15	✓	Introduction To Hand Tools
00104-15	✓	Introduction To Power Tools
00105-15	✓	Introduction To Blueprints
00107-15	✓	Basic Communication Skills
00108-15		Basic Employability Skills
00109-15	✓	Introduction to Material Handling

**NCCER Core  
 CSSO Certificate  
 Level 1 Certificate**

PFPB 1308 – Basic Pipefitting Skills

Module	PP	Title
08101-06	---	Orientation to the Trade
08102-06	✓	Pipefitter Hand Tools
08103-06	✓	Pipefitter Power Tools
08104-06	✓	Oxyfuel Cutting
08105-06	✓	Ladders and Scaffolds
08106-06	✓	Motorized Equipment
08205-06	✓	Threaded Pipe Fabrication

L2 missing: – 08208  
 L3 missing: – 08301 08302 08305 08309  
 L4 missing: – 08407 08408 08409

PFPB 1305 – Basic Blueprint Reading For Pipefitters

Module	PP	Title
08202-06	✓	Drawing and Detail Sheets
08204-06	---	Pipefitter Trade Math

PFPB 2310 – Intermediate Blueprint Reading for Pipefitters

Module	PP	Title
08204-06	✓	Pipefitter Trade Math
08401-07	✓	Advanced Blueprint Reading

PFPB 2307 – Pipe Fabrication and Installation I

Module	PP	Title
08209-06	✓	Underground Pipe Installation
08206-06	✓	Socket Weld Pipe Fabrication
08207-06	✓	Butt Weld Pipe Fabrication
08306-07	✓	Introduction to Above-Ground Pipe Installation



PFPB 2341 – Pipe Fabrication and Installation II

<u>Module</u>	<u>PP</u>	<u>Title</u>
08402-07	√	Advanced Pipe Fabrication
08403-07	√	Stress Relieving & Aligning
08406-07	√	Special Piping

PFPB 2349 – Field Measuring, Sketching, and Layout

<u>Module</u>	<u>PP</u>	<u>Title</u>
08304-07	---	Advanced Trade Math
08307-07	√	Field Routing and Vessel Trim

Cooperative Education Classes:

PFPB 1380 – Cooperative Education I – Pipefitter

PFPB 1381 – Cooperative Education II – Pipefitter

PFPB 2380 – Cooperative Education III - Pipefitter

**Modules Available On Special Request**

<u>Module</u>	<u>Title</u>
08106-06	Motorized Equipment
08208-06	Excavations
08301-07	Rigging Equipment
08302-07	Rigging Practices
08305-07	Motorized Equipment
08309-07	Testing Piping Systems and Equipment
08407-07	Hot Taps
08408-07	Maintaining Valves
08409-07	Intro to Supervisory Roles

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

**Associates Degree**

PFPB 2343 – Advanced Piping Practices

<u>Module</u>	<u>PP</u>	<u>Title</u>
08404-07	√	Steam Traps
08405-07	√	In-line Specialties

**Four (4) Electives:**

**Refer to Brazosport College Course Catalog for list of approved electives.**

**SAFETY, HEALTH & ENVIRONMENTAL MANAGEMENT**  
**MSTI Craft Training Program**  
**Course Requirements**  
**(Non-Craft Related Course)**

**\*\*OSHT 1405 – OSHA Regulations – Construction Industry**

**CSST Certificate**

<u>Module</u>	<u>PP</u>	<u>Title</u>
75101-13	√	Introduction to Safety
75120-13	√	Confined Spaces and Excavations
75104-13	√	Work-Zone Safety
75121-13	√	Electrical Safety
75122-13	√	Working from Elevations
75110-13	----	Steel Erection
75123-13	---	Heavy Equipment, Forklift, and Crane Safety
75119-13	---	Concrete and Masonry
75124-13	---	Introduction to Materials Handling

**\*\*OSHT 2309 – Safety Program Management**

<u>Module</u>	<u>PP</u>	<u>Title (2<sup>nd</sup> Edition beginning Spring '19)</u>
75201	---	Introduction to Safety Technology
75205	√	Positive Safety Communication
75219	√	Hazard Recognition, Environmental Awareness, and Occupational Health
75220	√	Job Safety Analysis and Pre-Task Planning
75221	√	Safety Data Tracking and Trending
75222	√	Site-Specific Safety Plans
75223	√	Safety Orientation and Safety Meetings
75224	√	Permits and Policies
75225	√	Incident Investigations, Policies, and Analysis
75226		Inspections and Recordkeeping

EPCT 1311 – Introduction to Environmental Science

OSHT 1313 – Accident Prevention

EPCT 1305 – Environmental Regulations Overview

EPCT 1441 – Principles of Industrial Hygiene

EPCT 2431 – Industrial Hygiene Applications

OSHT 2401 – OSHA Regulations – General Industry

CHEM 1305 – Introductory Chemistry

CHEM 1105 – Introductory Chemistry Laboratory

**One (1) Elective:**

**Refer to Brazosport College Course Catalog for list of approved electives.**

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

OSHT 2188 – Internship I – Occupational Safety & Health Technologist

OSHT 2189 – Internship II – Occupational Safety & Health Technologist

**\*\*Courses needed for NCCER Construction Site Safety Technician (CSST) Certification**

**WELDING**  
**MSTI Craft Training Program**  
**Course Requirements**

**CNBT 1318 – Construction Tools & Techniques**

<u>Module</u>	<u>PP</u>	<u>Title</u>
00101-15	✓	Basic Safety
00102-15		Introduction to Construction Math
00103-15	✓	Introduction To Hand Tools
00104-15	✓	Introduction To Power Tools
00105-15	✓	Introduction To Blueprints
00107-15	✓	Basic Communication Skills
00108-15		Basic Employability Skills
00109-15	✓	Introduction to Material Handling

**NCCER Core**  
**CSSO Certificate**  
**Level 1 Certificate**  
**Level 2 Certificate**  
**Level 3 Certificate**

WLDG 1428 – Introduction to Shield Metal Arc Welding

<u>Module</u>	<u>PP</u>	<u>Title</u>
29101-09	---	Welding Safety
29102-09	✓	Oxyfuel Cutting
29105-09	✓	Base Metal Preparation
29107-09	✓	SMAW – Equipment and Setup
29108-09	---	Shielded Metal Arc Electrodes
29109-09	✓	SMAW – Beads and Fillet Welds

WLDG 2406 – Intermediate Pipe Welding

<u>Module</u>	<u>PP</u>	<u>Title</u>
29103-09	✓	Plasma Arc cutting and gouging
29104-09	✓	Air Carbon Arc Cutting and Gouging
29201-09	✓	Welding Symbols
29203-09	---	Physical Characteristics & Mechanical Properties of Metals
29301-10	✓	SMAW Open Rod Pipe Welds

WLDG 2443 – Advanced Shielded Metal Arc Welding

<u>Module</u>	<u>PP</u>	<u>Title</u>
29106-09	✓	Weld Quality
29110-09	✓	Joint Fit-Up and Alignment
29111-09	✓	SMAW-Groove Welds with Backing
29112-09	✓	SMAW-Open V-Groove Welds

WLDG 2447 – Advanced Gas Metal Arc Welding

<u>Module</u>	<u>PP</u>	<u>Title</u>
29205-09	✓	GMAW & FCAW– Equipment and Filler Metal
29206-09	✓	GMAW & FCAW – Plate
29302-10	✓	GMAW – Pipe
29303-10	✓	FCAW Pipe

WLDG 1327 – Welding Codes

WLDG 2451 – Advanced Gas Tungsten Arc Welding

<u>Module</u>	<u>PP</u>	<u>Title</u>
29202-09	√	Reading Welding Detail Drawings
29207-09	√	GTAW – Equipment and Filler Metals
29208-09	√	GTAW – Plate
29304-10	√	GTAW – Carbon Steel Pipe

NDTE 1310 – Liquid Penetrant/Magnetic Particle Testing

PFPB 2307 – Pipe Fabrication and Installation I

Cooperative Education Classes and Additional Modules Available as follows:

WLDG 1280 – Cooperative Education I – Welding Technology (this is a 2-credit hour class)

WLDG 1281 – Cooperative Education II – Welding Technology (this is a 2-credit hour class)

WLDG 1380 – Cooperative Education I – Welding Technology (this is a 3-credit hour class)

WLDG 1381 – Cooperative Education II – Welding Technology (this is a 3-credit hour class)

WLDG 2380 – Cooperative Education III – Welding Technology (this is a 3-credit hour class)

\*\*\*\*\*End of MSTI Program\*\*\*\*\*

<b>Date</b>	<b>Revision</b>	<b>By</b>
4/8/21	Updated Dir of Ed, Instr Coursework, Millwright Coursework	Kelley Cope