Welding is the technology of using various methods to join, cut, scrape, or finish metal by applying intense heat and/or pressure to melt the edges of metal so they fuse permanently.

The Welding program at Trenholm State Community College is designed to give technical knowledge and experience in six different welding and cutting processes. The student will attain hands-on experience in pipe welding, brazing, manual and machine cutting, blueprint reading, and welding processes used by industry in the fabrication of steel components. Through practical application, a student is taken through a series of welds and processes, using different joints and weld structures duplicated as closely as possible to an actual on-the-job situation.

Employment of welders, cutters, solderers, and brazers is projected to grow 3 percent from 2019 to 2029, about as fast as the average for all occupations. Employment growth reflects the need for welders in manufacturing because of the importance and versatility of welding as a manufacturing process. The basic skills of welding are similar across industries, so welders can easily shift from one industry to another, depending on where they are needed most. For example, welders who are laid off in the automotive manufacturing industry may be able to find work in the oil and gas industry. The nation's aging infrastructure will require the expertise of welders, cutters, solderers, and brazers to help rebuild bridges, highways, and buildings. Also, the construction of new power generation facilities and, specifically, pipelines transporting natural gas and oil may result in new jobs.

The median annual wage for welders, cutters, solderers, and brazers was $42,490 in 2019. The median wage is the wage at which half the workers in an occupation earned more than that amount and half earned less. The lowest 10 percent earned less than $29,470, and the highest 10 percent earned more than $64,240.

As part of ongoing planning and evaluation, the College regularly evaluates student learning outcomes for each program.

<table>
<thead>
<tr>
<th>Award</th>
<th>Length</th>
<th>Credit Hours</th>
<th>Tuition/Fees</th>
<th>Books</th>
<th>Tools</th>
<th>Supplies</th>
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<tbody>
<tr>
<td>Associate Degree</td>
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<td>$10,335</td>
<td>$400</td>
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<tr>
<td>Certificate</td>
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<tr>
<td>Short Term Certificate</td>
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<td>16</td>
<td>$2,544</td>
<td>$150</td>
<td>$230</td>
<td>$0</td>
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<tr>
<td>Short Term Certificate</td>
<td>1 Term</td>
<td>13</td>
<td>$2,067</td>
<td>$150</td>
<td>$230</td>
<td>$0</td>
</tr>
</tbody>
</table>

* Tax not included. Prices are subject to change without prior notice; cost of books may vary considerably among suppliers. Cost of general education books is in addition to the total listed above. The length of the program is based on full-time status of 12-15 credit hours per term. Enrollment in transitional level general education courses will alter the length of the program.
Associate of Applied Science
Automotive/Advanced Manufacturing Welding

General Education Requirements (16 hours)

Area I - Written Composition (3 hours)
ENG-101 English Composition I 3
ENG-102 English Composition II 3
ENG-130 Technical Report Writing 3

Area II - Humanities & Fine Arts (3 hours)
(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If SPH-103, SPH-106, SPH-107, SPA-101 or SPA-102 has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:
ART-100 Art Appreciation 3
MUS-101 Music Appreciation 3

Humanities:
PHL-106 Intro to Philosophy 3
PHL-206 Ethics & Society 3
REL-100 History of World Religions 3
REL-151 Survey of Old Testament 3
REL-152 Survey of New Testament 3
SPA-101 Intro Spanish I 3
SPA-102 Intro Spanish II 3
SPH-106 Fundamentals of Oral Comm 3
SPH-107 Fundamentals of Public Speaking 3

Literature:
ENG-251 American Literature I 3
ENG-252 American Literature II 3
ENG-261 English Literature I 3
ENG-262 English Literature II 3
ENG-271 World Literature I 3
ENG-272 World Literature II 3

Area III - Natural Science & Mathematics (6-7 hours)
(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed.

Mathematics:
MTH-100 Intermediate Algebra 3
MTH-104 Plane Trigonometry 3
MTH-110 Finite Mathematics 3
MTH-112 Precalculus Algebra 3
MTH-116 Mathematical Applications 3

Natural Sciences:
BIO-101 Introduction to Biology I 4
BIO-102 Introduction to Biology II 4
BIO-103 Principles of Biology I 4
BIO-104 Principles of Biology II 4
PHS-111 Physical Science I 4
PHS-112 Physical Science II 4
PHY-120 Introduction to Physics 4

Area IV - History, Social & Behavioral Sciences (3 hours):
(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

History:
HIS-101 Western Civilization I 3
HIS-102 Western Civilization II 3
HIS-121 World History I 3
HIS-122 World History II 3
HIS-201 United States History I 3
HIS-202 United States History II 3

Social and Behavioral Sciences:
PSY-200 General Psychology 3
PSY-210 Human Growth and Development 3
SOC-200 Introduction to Sociology 3
POL-200 Introduction to Political Science 3
POL-211 American National Government 3

Area V - Pre-Professional/College Requirements:
(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:
ORI-101 Orientation to College 1
ADM-100 Industrial Safety 3
ADM-111 Manufacturing Safety Practices 3
WDT-109 SMAW Fillet/PAC/CAC 3
WDT-110 Industrial Blueprint Reading 3
WDT-119 Gas Metal Arc/Flux Cored Arc Wldg 3
WDT-228 Gas Tungsten Arc Welding 3

Welding Electives: (Choose 30 credit hours)
WDT-120 SMAW Groove Theory 3
WDT-122 SMAW Fillet/OFSC Lab 3
WDT-123 SMAW Fillet/PAC/CAC Lab 3
WDT-124 Gas Metal Arc/Flux Cored Arc Wldg Lab 3
WDT-125 SMAW Groove Lab 3
WDT-155 GTAW Carbon Pipe Lab 3
WDT-156 GTAW Stainless Pipe Lab 3
WDT-157 Consumable Welding Processes 3
WDT-158 Consumable Welding Processes Lab 3
WDT-167 FCAW Lab 3
WDT-219 Welding Inspection & Testing Theory 3
WDT-221 Pipefitting and Fabrication 3
WDT-257 SMAW Carbon Pipe Lab 3
WDT-268 GTAW Lab 3
WDT-286 Co-op 1

Elective:
CIS-146 Microcomputer Applications 3

Area V Credit Hours: 49
Total Credit Hours: 65
Certification
Automotive/Advanced Manufacturing - Welding

General Education Requirements (6 hours)

Area I - Written Composition (3 hours)
ENG-101 English Composition I 3
ENG-102 English Composition II 3
ENG-130 Technical Report Writing 3

Area II - Humanities & Fine Arts (0 hours)
(Humanities and Arts disciplines include but are not limited to: Area/Ethnic Studies, Art and Art History, Foreign Languages, Music and Music History, Philosophy, Ethics, Religious Studies, Theater and Dance.)

Note: If SPH-103, SPH-106, SPH-107, SPA-101 or SPA-102 has been taken an additional 3 semester hours in Humanities and Fine Arts must be taken to satisfy requirements in Area II.

Arts:
ART-100 Art Appreciation 3
MUS-101 Music Appreciation 3

Humanities:
PHL-106 Intro to Philosophy 3
PHL-206 Ethics & Society 3
REL-100 History of World Religions 3
REL-151 Survey of Old Testament 3
REL-152 Survey of New Testament 3
SPA-101 Intro Spanish I 3
SPA-102 Intro Spanish II 3
SPH-106 Fundamentals of Oral Comm 3
SPH-107 Fundamentals of Public Speaking 3

Literature:
ENG-251 American Literature I 3
ENG-252 American Literature II 3
ENG-261 English Literature I 3
ENG-262 English Literature II 3
ENG-271 World Literature I 3
ENG-272 World Literature II 3

Area III - Natural Science & Mathematics (3 hours)
(In addition to Mathematics, disciplines in the Natural Sciences include: Astronomy, Biological Sciences, Chemistry, Geology, Physical Geography, Earth Science, Physics, and Physical Science.)

Note: 3 semester hours in MTH must be completed.

Mathematics:
MTH-100 Intermediate Algebra 3
MTH-104 Plane Trigonometry 3
MTH-110 Finite Mathematics 3
MTH-112 Precalculus Algebra 3
MTH-116 Mathematical Applications 3

Natural Sciences:
BIO-101 Introduction to Biology I 4
BIO-102 Introduction to Biology II 4
BIO-103 Principles of Biology I 4
BIO-104 Principles of Biology II 4
PHS-111 Physical Science I 4
PHS-112 Physical Science II 4
PHY-120 Introduction to Physics 4

Area IV - History, Social & Behavioral Sciences (0 hours):
(Social and Behavioral Sciences include, but are not limited to: Anthropology, Economics, Geography, Political Science, Psychology, and Sociology.)

History:
HIS-101 Western Civilization I 3
HIS-102 Western Civilization II 3
HIS-121 World History I 3
HIS-122 World History II 3
HIS-201 United States History I 3
HIS-202 United States History II 3

Social and Behavioral Sciences:
PSY-200 General Psychology 3
PSY-210 Human Growth and Development 3
SOC-200 Introduction to Sociology 3
POL-200 Introduction to Political Science 3
POL-211 American National Government 3

* These courses are required for students without a high school diploma or GED.

Area V: Pre-Professional/College Requirements:
(Courses appropriate to the degree requirements and major of the individual student and electives.)

College Requirements:
ORI-101 Orientation to College 1
ADM-100 Industrial Safety 3
ADM-111 Manufacturing Safety Practices 3
WDT-109 SMAW Fillet/PAC/CAC 3
WDT-110 Industrial Blueprint Reading 3
WDT-119 Gas Metal Arc/Flux Cored Arc Wldg 3
WDT-228 Gas Tungsten Arc Welding 3
WDT-286 Co-op 1

Welding Electives: (Choose 21 credit hours)
WDT-120 SMAW Groove Theory 3
WDT-122 SMAW Fillet/OF C/C Lab 3
WDT-123 SMAW Fillet/PAC/CAC Lab 3
WDT-124 Gas Metal Arc/Flux Cored Arc Wldg Lab 3
WDT-125 SMAW Groove Lab 3
WDT-155 GTA W Pipe Lab 3
WDT-156 GTA Stainless Pipe Lab 3
WDT-157 Consumable Welding Processes 3
WDT-158 Consumable Welding Processes Lab 3
WDT-167 FCA Lab 3
WDT-219 Welding Inspection & Testing Theory 3
WDT-221 Pipefitting and Fabrication 3
WDT-257 SMAW Carbon Pipe Lab 3
WDT-268 GTA Lab 3

Elective:
CIS-146 Microcomputer Applications 3

Area V Credit Hours: 41
Total Credit Hours: 47
### Short Term Certificate
#### Automotive/Advanced Manufacturing Welding
#### Construction SMAW Plate Welding Concentration

**Area V: Pre-Professional/College Requirements:**
(Courses appropriate to the degree requirements and major of the individual student and electives.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORI-101</td>
<td>Orientation to College</td>
<td>1</td>
</tr>
<tr>
<td>ADM-100</td>
<td>Industrial Safety</td>
<td>3</td>
</tr>
<tr>
<td>WDT-109</td>
<td>SMAW Fillet/PAC/CAC</td>
<td>3</td>
</tr>
<tr>
<td>WDT-122</td>
<td>SMAW Fillet/OFC Lab</td>
<td>3</td>
</tr>
<tr>
<td>WDT-123</td>
<td>SMAW Fillet/PAC/CAC Lab</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 13**

### Short Term Certificate
#### Automotive/Advanced Manufacturing Welding
#### Manufacturing Welding Concentration

**Area V: Pre-Professional/College Requirements:**
(Courses appropriate to the degree requirements and major of the individual student and electives.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORI-101</td>
<td>Orientation to College</td>
<td>1</td>
</tr>
<tr>
<td>WDT-110</td>
<td>Industrial Blueprint Reading</td>
<td>3</td>
</tr>
<tr>
<td>WDT-119</td>
<td>Gas Metal Arc/Flux Cored Arc Welding</td>
<td>3</td>
</tr>
<tr>
<td>WDT-124</td>
<td>Gas Metal Arc/Flux Cored Arc Welding Lab</td>
<td>3</td>
</tr>
<tr>
<td>WDT-167</td>
<td>FCAW Lab</td>
<td>3</td>
</tr>
<tr>
<td>WDT-268</td>
<td>GTAW Lab</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 16**

### Short Term Certificate
#### Automotive/Advanced Manufacturing Welding
#### Pipe Welding Concentration

**Area V: Pre-Professional/College Requirements:**
(Courses appropriate to the degree requirements and major of the individual student and electives.)

<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>ORI-101</td>
<td>Orientation to College</td>
<td>1</td>
</tr>
<tr>
<td>WDT-155</td>
<td>GTAW Carbon Pipe Lab</td>
<td>3</td>
</tr>
<tr>
<td>WDT-156</td>
<td>GTAW Stainless Pipe Lab</td>
<td>3</td>
</tr>
<tr>
<td>WDT-158</td>
<td>Consumable Welding Processes Lab</td>
<td>3</td>
</tr>
<tr>
<td>WDT-221</td>
<td>Pipefitting and Fabrication</td>
<td>3</td>
</tr>
<tr>
<td>WDT-257</td>
<td>SMAW Carbon Pipe Lab</td>
<td>3</td>
</tr>
</tbody>
</table>

**Total Credit Hours: 16**
# Automotive/Advanced Manufacturing - Welding

## Course Descriptions

### Automotive/Advanced Manufacturing - Welding

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Hours</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADM-100</td>
<td>INDUSTRIAL SAFETY</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>ADM-111</td>
<td>MANUFACTURING SAFETY PRACTICES</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WDT-109</td>
<td>SMAW FILLET/PAC/CAC</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WDT-110</td>
<td>INDUSTRIAL BLUEPRINT READING</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WDT-119</td>
<td>GAS METAL ARC/FLUX CORED ARC WELDING</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WDT-120</td>
<td>SMAW GROOVE THEORY</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WDT-122</td>
<td>SMAW FILLET/OFC LAB</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>WDT-123</td>
<td>SMAW FILLET/PAC/CAC LAB</td>
<td>3</td>
<td></td>
</tr>
</tbody>
</table>

**ADM-100 INDUSTRIAL SAFETY**

PREREQUISITE: None

This course is an introduction to general issues, concepts, procedures, hazards, and safety standards found in industrial environment. This safety course is to make technicians aware of safety issues associated with their changing work environment and attempts to eliminate industrial accidents.

**ADM-111 MANUFACTURING SAFETY PRACTICES**

PREREQUISITE: None

This course is an introduction to general issues, concepts, procedures, hazards, and safety standards found in an industrial environment. This safety course is to make technicians aware of safety issues associated with their changing work environment and attempt to eliminate industrial accidents. This course will offer credentialing for NCCER Core and OSHA 10 hour.

**WDT-109 SMAW FILLET/PAC/CAC**

PREREQUISITE: None

This course provides the student with instruction on safety practices and terminology in the Shielded Metal Arc Welding (SMAW) process. Emphasis is placed on safety, welding terminology, equipment identification, set-up and operation, and related information in the SMAW process. This course also covers the rules of basic safety and identification of shop equipment and provides the student with the skills and knowledge necessary for the safe operation of carbon arc cutting and plasma arc cutting. This is a CORE course.

**WDT-110 INDUSTRIAL BLUEPRINT READING**

PREREQUISITE: None

This course provides students with the understanding and fundamentals of industrial blueprint reading. Emphasis is placed on reading and interpreting lines, views, dimensions, weld joint configurations and weld symbols. Upon completion students should be able to interpret welding symbols and blueprints as they apply to welding and fabrication. This is a CORE course.

**WDT-119 GAS METAL ARC/FLUX CORED ARC WELDING**

PREREQUISITE: None

This course introduces the student to the gas metal arc and flux cored arc welding process. Emphasis is placed on safe operating practices, handling and storage of compressed gasses, process principles, component identification, various welding techniques and base and filler metal identification. This is a CORE course.

**WDT-120 SMAW GROOVE THEORY**

PREREQUISITE: None

This course provides the student with instruction on joint design, joint preparation, and fit-up of groove welds in accordance with applicable welding codes. Emphasis is placed on safe operation, joint design, joint preparation, and fit-up. Upon completion, students should be able to identify the proper joint design, joint preparation and fit-up of groove welds in accordance with applicable welding codes. This is a CORE course.

**WDT-122 SMAW FILLET/OFC LAB**

PREREQUISITE: None

This course is designed introduce the student to the proper set-up and operation of the shielded metal arc welding equipment. Emphasis is placed on striking and controlling the arc, and proper fit-up of fillet joints. This course is also designed to instruct students in the safe operation of oxy-fuel cutting. Upon completion, students should be able to make fillet welds in all positions using electrodes in the F-3 groups in accordance with applicable welding code and be able to safely operate oxy-fuel equipment and perform those operations as per the applicable welding code.

**WDT-123 SMAW FILLET/PAC/CAC LAB**

PREREQUISITE: None

This course is designed introduce the student to the proper set-up and operation of the shielded metal arc welding equipment. Emphasis is placed on striking and controlling the arc, and proper fit-up of fillet joints. This course is also designed to instruct students in the safe operation of plasma arc and carbon arc cutting. Upon completion, students should be able to make fillet welds in all positions using electrodes in the F-4 groups in accordance with applicable welding code and be able to safely operate plasma arc and carbon arc equipment and perform those operations as per...
applicable welding code.

<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDT-124</td>
<td>GAS METAL ARC/FLUX CORED ARC WELDING LAB</td>
<td>3</td>
</tr>
<tr>
<td>WDT-125</td>
<td>SMAW GROOVE LAB</td>
<td>3</td>
</tr>
<tr>
<td>WDT-155</td>
<td>GTAW CARBON PIPE LAB</td>
<td>3</td>
</tr>
<tr>
<td>WDT-156</td>
<td>GTAW STAINLESS PIPE LAB</td>
<td>3</td>
</tr>
<tr>
<td>WDT-157</td>
<td>CONSUMABLE WELDING PROCESSES</td>
<td>3</td>
</tr>
<tr>
<td>WDT-158</td>
<td>CONSUMABLE WELDING PROCESSES LAB</td>
<td>3</td>
</tr>
<tr>
<td>WDT-167</td>
<td>FLUX CORE ARC WELDING LAB</td>
<td>3</td>
</tr>
<tr>
<td>WDT-219</td>
<td>WELDING INSPECTION AND TESTING THEORY</td>
<td>3</td>
</tr>
<tr>
<td>WDT-221</td>
<td>PIPEFITTING AND FABRICATION</td>
<td>3</td>
</tr>
</tbody>
</table>

This course provides instruction and demonstration using the various transfer methods and techniques to gas metal arc and flux cored arc welds. Topics included are safety, equipment set-up, joint design and preparation, and gases.

This course provides instruction and demonstration in the shielded metal arc welding process on carbon steel plate with various size F-3 and F-4 group electrodes in all positions. Emphasis is placed on welding groove joints and using various F-3 and F-4 group electrodes in all positions. Upon completion, the student should be able to make visually acceptable groove weld joints in accordance with applicable welding codes.

This course is designed to provide the student with the skills in welding carbon steel pipe with gas tungsten arc welding techniques in various pipe weld positions. Upon completion, students should be able to perform gas tungsten arc welding on carbon steel pipe with the prescribed filler metals in various positions in accordance with the applicable code.

This course is designed to provide the student with the skills in welding stainless steel pipe with gas tungsten arc welding techniques in various pipe weld positions. Upon completion, students should be able to perform gas tungsten arc welding on stainless steel pipe with the prescribed filler metals in various positions in accordance with the applicable code.

This course provides instruction and demonstration with the consumable welding processes to produce groove and fillet welds in all positions, according to applicable welding codes. Topics include safe operating practices, equipment identification, equipment set-up, correct selection of electrode, current/polarity, shielding gas and base metals.

This course provides instruction and demonstration with the consumable welding processes to produce groove and fillet welds in all positions, according to applicable welding codes. Topics include safe operating practices, equipment identification, equipment set-up, correct selection of filler metals, current/polarity, shielding gas and base metals. Upon completion, the student should be able to produce groove and fillet welds using consumable welding processes according to AWS Codes and standards. This course supports CIP Code 48.0508

This course provides instruction and demonstration with the flux core arc welding process to produce groove and fillet welds in all positions, according to applicable welding codes. Topics include safe operating practices, equipment identification, equipment set-up, correct selection of filler metals, current/polarity, shielding gas and base metals. Upon completion, the student should be able to produce groove and fillet welds using the FCAW welding process, according to AWS Codes and Standards.

This course provides the student with inspection skills and knowledge necessary to evaluate welded joints and apply quality control measures as needed. Emphasis is placed on interpreting welding codes, welding procedures, and visual inspection methods. Upon completion, students should be able to visually identify visual acceptable weldments as prescribed by the code or welding specification report.

This course provides the student with skills and practices necessary for fabricating pipe plans using pipe and fittings. Emphasis is placed on various pipe fittings to include various degree angles. Upon completion, students should be able to fit various pipe fittings, and cut and fabricate tees, and assorted angles.
<table>
<thead>
<tr>
<th>Course #</th>
<th>Course Title</th>
<th>Credit Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>WDT-228</td>
<td>GAS TUNGSTEN ARC WELDING</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course provides a student with the knowledge needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, a student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.</td>
<td></td>
</tr>
<tr>
<td>WDT-257</td>
<td>SMAW CARBON PIPE LAB</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course is designed to provide the student with the skills in welding carbon steel pipe with shielded metal arc welding techniques in various pipe weld positions. Upon completion, students should be able to perform shielded metal arc welding on carbon steel pipe with the prescribed electrodes in various positions in accordance with the applicable code.</td>
<td></td>
</tr>
<tr>
<td>WDT-268</td>
<td>GTAW LAB</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>This course provides student with skills needed to perform gas tungsten arc welds using ferrous and/or non-ferrous metals, according to applicable welding codes. Topics include safe operating practices, equipment identification and set-up, correct selection of tungsten type, polarity, shielding gas and filler metals. Upon completion, a student should be able to identify safe operating practices, equipment identification and setup, correct selection of tungsten type, polarity, shielding gas, filler metals, and various welds on ferrous and/or non-ferrous metals, using the gas tungsten arc welding process according to applicable welding codes.</td>
<td></td>
</tr>
<tr>
<td>WDT-286</td>
<td>CO-OP</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>PREREQUISITE: As required by program</td>
<td></td>
</tr>
<tr>
<td></td>
<td>These courses constitute a series wherein the student works on a part-time basis in a job directly related to welding. In these courses the employer evaluates the student’s productivity and the student submits a descriptive report of his work experiences. Upon completion, the student will demonstrate skills learned in an employment setting.</td>
<td></td>
</tr>
</tbody>
</table>