

# 2023-2024 TTC Catalog - Welding (WLD)

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## **WLD 001 - Welding Non Equivalent**

**Lec: 0 Lab: 0 Credit: \***

Indicates credit given for welding course work transferred from another college for which there is no equivalent course at TTC. \*Hours vary depending on external course.

**Division:** Manufacturing and Maintenance

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## **WLD 110 - Welding Safety and Health**

**Lec: 1.0 Lab: 0 Credit: 1.0**

### **Course Offered**

Fall  
Spring  
Summer

This course introduces safety and health hazards associated with welding and related processes.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 111 - Arc Welding I**

**Lec: 1.0 Lab: 9.0 Credit: 4.0**

### **Course Offered**

Fall  
Spring  
Summer

This course covers the safety, equipment and skills used in the shielded metal arc welding process. Fillet welds are made to visual criteria in several positions.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 114 - Advanced Arc Welding**

**Lec:** 0 **Lab:** 3.0 **Credit:** 1.0

### **Course Offered**

Fall  
Spring  
Summer

This course is a continued study of out-of-position shielded metal arc welding.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 118 - Gas Metal Arc Welding Ferrous I**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the equipment setup and fundamental techniques for gas metal arc welding on ferrous metals.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 119 - Gas Metal Arc Welding Ferrous II**

**Lec:** 0 **Lab:** 3.0 **Credit:** 1.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the techniques used in preparation for gas metal arc welder qualification on ferrous metals.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 120 - Flux Cored Arc Welding I**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the equipment setup and fundamental techniques for flux cored arc welding.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 123 - Gas Metal Arc Welding Non-Ferrous II**

**Lec:** 0 **Lab:** 3.0 **Credit:** 1.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the techniques used in preparation for gas metal arc welder qualification on nonferrous metals.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 127 - Structural Blueprints I**

**Lec:** 3.0 **Lab:** 0 **Credit:** 3.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the fundamentals of blueprint reading for structural welding applications including orthographic views, lines, basic dimensioning, and basic welding symbol interpretation.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 132 - Inert Gas Welding Ferrous**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers setup and adjustment of equipment and fundamental techniques for welding ferrous metals.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 133 - Inert Gas Welding Ferrous Tubing**

**Lec:** 0 **Lab:** 3.0 **Credit:** 1.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the techniques used in gas tungsten arc welding of ferrous tubing.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 137 - Inert Gas Welding Aluminum Tubing**

**Lec:** 0 **Lab:** 3.0 **Credit:** 1.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the techniques used in gas tungsten arc welding of aluminum tubing.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 141 - Weld Quality**

**Lec: 2.0 Lab: 0 Credit: 2.0**

### **Course Offered**

Fall

This course introduces weld quality assurance.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 145 - Field Welding**

**Lec: 1.5 Lab: 1.5 Credit: 2.0**

### **Course Offered**

Fall

Spring

Summer

This course covers welding with portable welding machines in field use.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 150 - Specialized Welding**

**Lec: 1.0 Lab: 9.0 Credit: 4.0**

### **Course Offered**

Summer

This course covers flux cored and gas metal arc welding.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 152 - Tungsten Arc Welding**

**Lec: 1.0 Lab: 9.0 Credit: 4.0**

### **Course Offered**

Fall

Spring

Summer

This course covers gas tungsten arc welding of carbon steel or stainless steel with stainless steel filler metal..

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 170 - Qualification Welding**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Fall

Spring

Summer

This course covers the procedures and practices used in taking welder qualification tests.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 201 - Welding Metallurgy**

**Lec:** 2.0 **Lab:** 0 **Credit:** 2.0

### **Course Offered**

Spring

This course covers the weldability of metals, weld failure, and the effects of heat on chemical, physical and mechanical properties.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 203 - Structural Blueprints II**

**Lec:** 2.0 **Lab:** 0 **Credit:** 2.0

### **Course Offered**

Spring

This course covers advanced blueprint reading skills including structural shapes identification and applications, creating bill of materials, welding symbol application, basic layout techniques and mathematics, working with dimensions and tolerances.

**Prerequisite**

WLD 127

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 222 - Advanced Fabrication Welding**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Spring  
Summer

This course covers the layout, construction, and assembly of metal projects using metal working and welding equipment.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 225 - Arc Welding Pipe I**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Summer

This course covers the techniques used in shielded metal arc welding of groove welds on pipe.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 226 - Arc Welding Pipe II**

**Lec:** 0 **Lab:** 3.0 **Credit:** 1.0

### **Course Offered**

Summer

This course covers the techniques used in shielded metal arc welding of fillet welds on pipe.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 228 - Inert Gas Welding Pipe I**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Fall  
Spring  
Summer

This course covers the techniques used in gas tungsten arc welding of groove welds on ferrous pipe.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 229 - Inert Gas Welding Pipe II**

**Lec:** 1.5 **Lab:** 1.5 **Credit:** 2.0

This course covers the techniques used in gas tungsten arc welding of groove welds on alloyed steel and nonferrous pipe.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 231 - Gas Metal Arc and Flux Cored Arc Welding Pipe I**

**Lec:** 1.0 **Lab:** 9.0 **Credit:** 4.0

### **Course Offered**

Spring  
Summer

This course covers the techniques used in gas metal arc and/or flux cored arc welding of groove welds on pipe.

**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 232 - Gas Metal Arc-Flux Cored Arc Welding Pipe II**

**Lec:** 1.5 **Lab:** 1.5 **Credit:** 2.0

This course covers the techniques used in gas metal arc and/or flux cored arc welding of fillet welds on pipe.



**Grade Type:** Letter Grade

**Division:** Manufacturing and Maintenance

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## **WLD 240 - Robotic Welding and Manufacturing**

**Lec:** 3.5 **Lab:** 1.5 **Credit:** 4.0

**Course Offered**

Spring

This course covers robotic welding systems, safety, operations and applications.

**Grade Type:** Letter Grade

**Restrictions:** Restricted to Welding and Production Technology Majors

**Division:** Manufacturing and Maintenance

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