

# Welding (WELD)

## **WELD 105 Related Welding**

**1 – 6 credits , REEL**

**Quarter(s): S, F, W, Sp**

Presents the fundamentals of welding and cutting processes. Covers safe operation of selected power tools and equipment used in the metal trades. Designed for students in certificates and degrees in the vocational fields other than welding. Lab hours are required for this course.

Prerequisites: None

## **WELD 141 SMAW - Stick Welding with E7018**

**1 – 10 credits , REEL**

**Quarter(s): S, F, W, Sp**

Presents the fundamentals of stick welding of mild steel with 7018 electrodes, in all welding positions for numerous weld joints. Explains the fundamentals of the carbon arc, oxy-fuel, and plasma arc cutting processes. Explores key welding and fitting techniques through project-based print reading. Covers selected cutting processes and equipment used in the metal trades. This is the first course recommended for students seeking a welding certificate or degree. Lab hours are required for this course.

Prerequisite: None

## **WELD 142 Advanced SMAW - WABO**

**1 – 10 credits , REEL**

**Quarter(s): S, F, W, Sp**

Expands on the fundamentals of stick welding of mild steel with 7018 electrodes. Students work towards a 2-position WABO plate certification weld test on 1-inch plate. Emphasizes competency in the stick welding process by following blueprints to complete real-world projects. Second course recommended for students seeking a welding degree (not necessary for welding certificate). Lab hours are required for this course.

Prerequisites: WELD 141 or Instructor Permission

## **WELD 143 SMAW - Stick Welding with E6010**

**1 – 10 credits , REEL**

**Quarter(s): S, F, W, Sp**

Presents the fundamentals of stick welding of mild steel with 6010 electrodes in all welding positions for numerous weld joints. Explores key welding and fitting techniques through project-based print reading. Covers selected cutting processes and equipment used in the metal trades. Third course recommended for students seeking a welding degree (not necessary for welding certificate). Lab hours are required for this course.

Prerequisites: WELD 142 or Instructor Permission

## **WELD 158 Welding Theory and Fabrication**

**5 credits , REEL**

**Quarter(s): Sp**

Covers theoretical and practical applications of welding processes and metal fabrication. Work on project is required outside of class. Lab hours are required for this course.

Prerequisite: WELD 141 or instructor permission

## **WELD 241 FCAW-G - Dual Shield Wire Feed Welding with E71T-1**

**1 – 10 credits , REEL**

**Quarter(s): S, F, W, Sp**

Presents the fundamentals of wire feed welding of mild steel with E71T-1 dual shield 0.045-inch electrode wire in all welding positions for numerous weld joints. Explores key welding and fitting techniques through project-based print reading. Covers selected cutting processes and equipment used in the metal trades. Fourth course recommended for students seeking a welding degree OR the second course for welding certificate. Lab hours are required for this course.

Prerequisites: None

**WELD 242 Advanced FCAW-G - WABO**  
**1 – 6 credits , REEL**  
**Quarter(s): S, F, W, Sp**

Expands on knowledge and skills of wire feed welding of mild steel with E71T-1 dual shield 0.045" electrode wire in all welding positions for numerous weld joints. Prepares for 2-position WABO plate certification weld test on 1" plate. Expands on key welding and fitting techniques through project-based print reading. Fifth course recommended for students seeking a welding degree (not necessary for welding certificate). Lab hours are required for this course.

Prerequisites: WELD 241 or Instructor Permission

**WELD 243 GMAW - Solid Wire Feed Welding with ER70S-6 and ER5356**  
**1 – 6 credits , REEL**  
**Quarter(s): S, F, W, Sp**

Presents wire feed welding of mild steel with ER70S-6 solid 0.035" electrode wire and ER5356 aluminum in all welding positions for numerous weld joints. Expands on key welding and fitting techniques through project-based print reading. Presents selected cutting processes and equipment used in the metal trades. Sixth course recommended for students seeking a welding degree OR third course for welding certificate. Lab hours are required for this course.

Prerequisite: WELD 241 or Instructor Permission

**WELD 255 GTAW - Tig Welding with ER70S-6 and ER5356**  
**1 – 10 credits , REEL**  
**Quarter(s): S, F, W, Sp**

Covers the fundamentals of tig welding of mild steel with ER70S-6 and aluminum welding with ER5356, in all welding positions for numerous weld joints. Explores key welding and fitting techniques through project-based print reading. Presents selected cutting processes and equipment used in the metal trades. Seventh and final course for students seeking a welding

degree (course not necessary for welding certificate). Lab hours are required for this course.

Prerequisites: None

**WELD 288 Cooperative Work Experience**  
**1 – 15 credits , REEL**  
**Quarter(s): S, F, W, Sp**

Provides work-based learning experience in a specific program of study. Individualized student outcomes are developed, focusing on behaviors that contribute to workplace success.

Prerequisites: Instructor or Cooperative Education Coordinator permission  
 Concurrent requirements: COLL 289 or BUS 294 must be taken prior to or concurrent with this course.

**WELD 299 Independent Study**  
**1 – 10 credits**  
**Quarter(s): S, F, W, Sp**

Offers individualized learning opportunities for knowledge or skill development. Content and expectations are established between the student and instructor, and documented in an Independent Study contract.

Prerequisites: By instructor permission only.

**WELD 60 WABO Exam Preparation**  
**1 – 6 credits , REEL**  
**Quarter(s): F, W, Sp**

Provides focused studies toward advanced welding techniques in preparation for the WABO (Washington Association of Building Officials) welder certification test. This course is a prerequisite for WELD 070 and 075 (WABO test courses). Passing a WABO test is required for AAS degree in Welding. Lab hours are required for this course.

Prerequisites: Instructor permission required to enroll.

**WELD 70 Welding Certification (WABO Retest)**  
**0 credits**  
**Quarter(s): S, F, W, Sp**

Provides WABO testers the opportunity to do a complete or partial retest if initial attempts

to certify welds did not pass inspection. This course is a program requirement. Successful completion of the WABO certification exam is required for graduation.

Prerequisites: WELD 060 or Instructor permission

### **WELD 71 Welding Support I**

**1 credit**

**Quarter(s): F**

Introduces shop safety practices and common welding techniques for related curriculums. The common welding techniques addressed will include oxy/fuel cutting and brazing, and basic welding. Concurrent enrollment in WELD 105 required.

Prerequisite: None

### **WELD 72 Welding Support II**

**1 credit**

**Quarter(s): W**

Introduces shop safety practices and common welding techniques for related curriculums. The common welding techniques addressed will include oxy/fuel cutting and brazing, basic arc welding, and wire feed welding. Concurrent enrollment in WELD 105 required.

Prerequisite: None

### **WELD 75 Welding Certification (WABO Exam)**

**0 credits**

Provides WABO testing with the following processes: SMAW, FCAW-S, FCAW-G, GMAW on plate, pipe, or light gauge materials. This course is a program requirement. Successful completion of the WABO certification exam is required for graduation.

Prerequisites: WELD 060 or Instructor permission