# WELDING (WELD)

## WELDING BLUEPRINT READING
- **WELD 102**
  - 6 Credits/Units
  - 44 hours of lecture / 44 hours of lab
  - **Prerequisite:** A grade of "C" or better in WELD 102 or concurrent enrollment in HLTH 120, and eligibility for MATH 030 or MATH 092.
  - An introduction to the welding industry and the various career paths available within the industry. Practical application in general shop safety and department-required training on metal working equipment. [GE]

## WELDING SCULPTURE LAB I
- **WELD 120**
  - 3 Credits/Units
  - 66 hours of lab
  - Concurrent enrollment in ART 295 required.
  - Development of a rudimentary expressive design language using welded metal as a medium. Exploration of beginning welding and metal-working skills. [GE]

## WELDING SCULPTURE LAB II
- **WELD 121**
  - 3 Credits/Units
  - 66 hours of lab
  - Concurrent enrollment in ART 296 required.
  - Three dimensional design problems are explored while creating a welded metal sculpture. Gas metal arc welding and plasma arc cutting are introduced. Use of hydraulic power equipment and metal cut-off equipment is covered. [GE]

## WELDING SCULPTURE LAB III
- **WELD 122**
  - 3 Credits/Units
  - 66 hours of lab
  - Concurrent enrollment in ART 297 required.
  - A fabricated welded metal sculpture is created while learning advanced metal working skills. The gas tungsten arc welding process and resistance welding are covered. [GE]

## GAS METAL ARC WELDING
- **WELD 140**
  - 6 Credits/Units
  - 33 hours of lecture / 66 hours of lab
  - Concurrent enrollment in WELD 141 or consent of Instructional Unit.
  - **Prerequisite:** A grade of "C" or better in WELD 102 or consent of Instructional Unit.
  - Instructional theory and application of Gas Metal Arc Welding processes on ferrous metals. [GE]

## GAS METAL ARC FABRICATION
- **WELD 141**
  - 6 Credits/Units
  - 33 hours of lecture / 66 hours of lab
  - Concurrent enrollment in WELD 140 or consent of Instructional Unit.
  - **Prerequisite:** A grade of "C" or better in WELD 102 or consent of Instructional Unit.
  - Application of concepts of gas metal arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. [GE]

## FLUX CORE ARC WELDING
- **WELD 142**
  - 6 Credits/Units
  - 33 hours of lecture / 66 hours of lab
  - Concurrent enrollment in WELD 143 or consent of Instructional Unit.
  - **Prerequisite:** A grade of "C" or better in WELD 102, 140 and 141 or consent of Instructional Unit.
  - Instructional theory and application of arc cutting processes/oxyfuel cutting and flux core arc welding processes on ferrous metals. [GE]

## FLUX CORE ARC FABRICATION
- **WELD 143**
  - 6 Credits/Units
  - 33 hours of lecture / 66 hours of lab
  - Concurrent enrollment in WELD 142 or consent of Instructional Unit.
  - **Prerequisite:** A grade of "C" or better in WELD 102, 140 and 141, or consent of Instructional Unit.
  - Application of concepts of flux core arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. [GE]

## SHIELDED METAL ARC WELDING
- **WELD 144**
  - 6 Credits/Units
  - 33 hours of lecture / 66 hours of lab
  - Concurrent enrollment in WELD 145 or consent of Instructional Unit.
  - **Prerequisite:** A grade of "C" or better in WELD 102, 142 and 143, or consent on Instructional Unit.
  - Instructional theory and application of arc cutting processes/oxyfuel cutting and shielded metal arc welding processes on ferrous metals. [GE]

## SHIELDED METAL ARC FABRICATION
- **WELD 145**
  - 6 Credits/Units
  - 33 hours of lecture / 66 hours of lab
  - Concurrent enrollment in WELD 144 or consent of Instructional Unit.
  - **Prerequisite:** A grade of "C" or better in WELD 102, 142 and 143, or consent of Instructional Unit.
  - Application of concepts of shielded metal arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. [GE]

## WELDING CERTIFICATION
- **WELD 156**
  - 2 Credits/Units
  - 44 hours of lab
  - **Prerequisite:** Successful completion with a "C" or better of WELD 102 and consent of Instructional Unit.
  - Students will review the requirements to earn program required AWS welding certifications. [GE] [PNP]

## COOPERATIVE WORK EXPERIENCE
- **WELD 199**
  - 5 Credits/Units
  - 165 hours of clinical
  - **Prerequisite:** Consent of Instructional Unit.
  - Supervised work experience in an approved job. Completion of specific learning objectives and employer evaluation. [GE]
Welding (WELD)

GAS METAL ARC FABRICATION
WELD 241 6 Credits/Units
33 hours of lecture / 66 hours of lab
Concurrent enrollment in WELD 240 or consent of Instructional Unit.
Prerequisite: A grade of "C" or better in WELD 102, 144 and 145, or consent of Instructional Unit.
Application of concepts of gas tungsten arc welding processes on ferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. [GE]

ADVANCED WIRE FEED WELDING
WELD 242 6 Credits/Units
33 hours of lecture / 66 hours of lab
Concurrent enrollment in WELD 243 or consent of Instructional Unit.
Prerequisite: A grade of "C" or better in WELD 102, 142, 240 and 241, or consent of Instructional Unit.
Advanced instructional theory and application of arc cutting processes/oxyfuel cutting, sub-arc welding and wire-feed welding processes on ferrous and nonferrous metals. [GE]

ADVANCED WIRE FEED FABRICATION
WELD 243 6 Credits/Units
33 hours of lecture / 66 hours of lab
Concurrent enrollment in WELD 242 or consent of Instructional Unit.
Prerequisite: A grade of "C" or better in WELD 102, 143, 240 and 241 or consent of Instructional Unit.
Application of concepts of wire feed welding processes on ferrous and nonferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. [GE]

ADVANCED GAS TUNGSTEN ARC WELDING
WELD 244 6 Credits/Units
33 hours of lecture / 66 hours of lab
Concurrent enrollment in WELD 245 or consent of Instructional Unit.
Prerequisite: A grade of "C" or better in WELD 102, 240, 242 and 243 or consent of Instructional Unit.
Advanced instructional theory and application of arc cutting processes/oxyfuel cutting and gas tungsten arc welding processes on ferrous and nonferrous metals. [GE]

ADVANCED GAS TUNGSTEN ARC FABRICATION
WELD 245 6 Credits/Units
33 hours of lecture / 66 hours of lab
Concurrent enrollment in WELD 244 or consent of Instructional Unit.
Prerequisite: A grade of "C" or better in WELD 102, 241, 242 and 243, or consent of Instructional Unit.
Application of concepts of advanced gas tungsten arc welding processes on nonferrous metals with a focus on fabrication techniques, proper use of hand tools and equipment found in industry. [GE]

SELECTED TOPICS
WELD 280 6 Credits/Units
66 hours of lecture
Selected topics in Welding as listed in the term class schedule.
Repeatable for credit. [GE]

SPECIAL PROJECTS
WELD 290 5 Credits/Units
Prerequisite: Consent of Instructional Unit required.
Projects assigned according to needs and abilities of the student. Hours arranged with instructor. Maximum of 15 credits allowed toward a certificate or degree. [GE]