

Welding

WELD 111 Basic Welding (3 credit, 1 lecture, 4 lab)

Provides skills in electric arc welding, Oxy-Acetylene welding, and cutting. Metallurgy of welding as well as all positions of welding will be explored. Variable credit and may be repeated three times.

WELD 112 Metallurgy/Blueprint Reading (4 credit, 4 lecture, 0 lab)

Fundamental characteristics and properties of industrial metals, along with Basic Blueprint and Shop Drawing Interpretation.

WELD 113 Metallurgy (2 credit, 2 lecture, 0 lab)

Fundamental characteristics and properties of industrial metals.

WELD 114 Blueprint Reading (2 credit, 2 lecture, 0 lab)

Basic blueprint and shop drawing interpretation

WELD 131 Arc Welding I (3 credit, 1 lecture, 4 lab)

A study of shielded metal arc welding procedures used by industries concentrating on metallic arc welding in flat, horizontal, overhead and vertical positions.

WELD 132 Gas Welding & Cutting (3 credit, 1 lecture, 4 lab)

A study of the techniques, procedures, and uses of oxyacetylene welding and cutting equipment in flat, horizontal and vertical positions.

WELD 133 Low Hydrogen I (3 credit, 1 lecture, 4 lab)

A continuation of WELD 131, emphasizing shielded metal arc welding in flat, horizontal, vertical and overhead positions. **Pre-Requisite:** WELD 131 or instructor consent.

WELD 134 Low-Hydrogen II (3 credit, 2 lecture, 2 lab)

A continuation of arc WELD 133 using the low-hydrogen electrode. Concentrates on bend testing in vertical (up-hill) and overhead positions using multi-pass vee groove welds. **Pre-Requisite:** WELD 131 and WELD 133, or instructor consent.

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WELD 135 Advanced Gas Welding (3 credit, 1 lecture, 4 lab)

A continuation of Welding 132. Horizontal, vertical, and overhead welding are emphasized. Also brazing and soldering techniques. **Pre-Requisite:** WELD 132 or instructor consent.

WELD 137 Pipe Welding (3 credit, 1 lecture, 4 lab)

Designed to introduce the student to pipe welding (fixed position) and basic pipe layout. **Pre-Requisite:** WELD 131, WELD 133, WELD 139, and WELD 151 or instructor consent.

WELD 138 Industrial Welding (6 credit, 1 lecture, 10 lab)

An advanced skill development course concerning the repair of thick metals and castings as found on track machines, agri-implements, mining and earth moving equipment. Emphasis on hard facing, i.e., wear-points, track blocks, and dozer blades. **Pre-Requisite:** WELD 131-134, WELD 112.

WELD 139 TIG Welding (3 credit, 1 lecture, 4 lab)

Concentrates on the processes of Gas Tungsten Arc welding. Emphasis on aluminum, stainless and low carbon steel in flat, horizontal, vertical positions. **Pre-Requisite:** WELD 132 or instructor consent.

WELD 151 MIG Welding (3 credit, 1 lecture, 4 lab)

Concentrates on processes of gas metal arc welding. Studies flat, horizontal, and vertical welding. **Pre-Requisite:** WELD 133 or instructor consent.

WELD 192 Extended Welding Certification ((3 credit, 1 lecture, 4 lab)

Preparation for American Welding Society certification exams under the AWS code D1.1 and AWS B2.1 welder performance testing. Prepares students for multiple AWS certifications. Variable credit and may be repeated three times. **Pre-Requisite:** Completion of Welding Technology Certificate or instructor consent.

WELD 290 Selected Topics in Welding (3 credit, 3 lecture, 0 lab)

An in-depth study of selected problems or topics in Welding. The exact content and instructional methodology will vary from semester to semester depending on the subject to be studied. A syllabus or course outline containing additional information will be available with pre-registration materials each time the course is offered. This course may be offered as variable credit and repeated if different topics are considered, but cannot exceed a total of six (6) credits toward graduation.

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WELD 291 AWS Certification Test Prep (0.5 credit, 0.5 lecture, 0 lab)

Preparation for American Welding Society certification exams. **Pre-Requisite:** Two years previous work experience or previous enrollment in this area of study.