WELD 176 Magnetic Particle Testing Level II (1, 2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides theory lectures and practical training on magnetic particle testing, performing calibrations, measuring samples, and performing non-destructive testing using magnetic particle theory. Encourages group discussions around practical problems and provides field expertise on how to resolve them. Meets or exceeds requirements for ASNT Magnetic Particle Testing Level II.

WELD 177 Magnetic Particle Testing Level III (1, 2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides basic knowledge into how to effectively perform magnetic particle inspection. Emphasis is placed on the properties of electricity and magnetism, understanding longitudinal and circular magnetism, use of central conductor, coil and direct magnetization equipment, and the use of yokes and prods. In addition to covering the theoretical aspects of this method, provides demonstrations and practical hands-on laboratory time on both portable and stationary equipment. Meets or exceeds ASNT Magnetic Particle Testing Level III.

WELD 180 Ultrasonic Testing Level I (1, 2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides knowledge and skills in the setup, calibration, and inspection of materials using ultrasonic testing equipment. Fundamental concepts and terminology of ultrasonics and mathematical relationships that exist between them. Meets or exceeds the content recommended by the American Society for Nondestructive Testing for Level I.

WELD 181 Ultrasonic Testing Level II (1, 2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides knowledge and skills in the setup, calibration, and inspection of materials using ultrasonic testing equipment. Fundamental concepts and terminology of ultrasonics and mathematical relationships that exist between them. Meets or exceeds the content recommended by the American Society for Nondestructive Testing for Level II.

WELD 182 Ultrasonic Testing Level III (1, 2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Advanced topics and training in ultrasonic testing of materials.

WELD 183 Ultrasonic Phased Array Inspection Level I (1, 2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides training in advanced ultrasonic inspection of welds using straight-beam, angle-beam, and phased array ultrasonic testing.

WELD 184 Ultrasonic Phased Array Inspection Level II (1-2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides training in advanced ultrasonic inspection of welds using straight-beam, angle-beam, and phased array ultrasonic testing.

WELD 185 Ultrasonic Phased Array Inspection Level III (1-2)
½ or 1 hour lecture - 2 or 3 hours laboratory
Transfer acceptability: CSU
Provides training in advanced ultrasonic inspection of welds using straight-beam, angle-beam, and phased array ultrasonic testing.

WELD 197 Welding Technology Topics (5 - 3)
Units awarded in topics courses are dependent upon the number of hours required of the student. Any combination of lecture and/or laboratory may be scheduled by the department. Refer to Class Schedule.
Transfer acceptability: CSU
Topics in Welding Technology. See Class Schedule for specific topic offered. Course title will designate subject covered.