## WELDING (WLDG)

### WLDG 1204 Fundamentals of Oxy-Fuel Welding and Cutting 2 Credits (1 Lec, 3 Lab)
This course covers Oxy-fuel welding and cutting equipment. Includes equipment safety, setup, and maintenance.
Course Type: Technical

### WLDG 1305 Art Metals Welding and CNC Fabrication 3 Credits (2 Lec, 2 Lab)
This course covers the fundamentals of conceptualizing and producing utilitarian items in ferrous and non-ferrous metals. Includes skill development through the techniques of sinking, raising, repousse, and piercing to create objects from sheet and stock materials. Also covers welding, brazing, soldering, tinning, polishing, and tool making.
Course Type: Technical

### WLDG 1308 Metal Sculpture Welding and Fabrication 3 Credits (2 Lec, 2 Lab)
This course covers techniques and methods of oxy-acetylene and electric welding and cutting to produce metal sculptures. Includes skill development in material forming, welding, brazing, and finishing techniques. Also covers work ethics, artistic styles, and professionalism.
Course Type: Technical

### WLDG 1412 Introduction to Flux Cored Arc Welding 4 Credits (2 Lec, 6 Lab)
This course is an overview of terminology, safety procedures, and equipment set-up. Practice in performing T-joints, lap joints, and butt joints using Flux Cored Arc Welding (FCAW) equipment.
Course Type: Technical

### WLDG 1413 Introduction to Blueprint Reading 4 Credits (2 Lec, 4 Lab)
This course is a study of industrial blueprints. Emphasis placed on terminology, symbols, graphic description, and welding processes. Includes systems of measurement and industry standards. Also includes interpretation of plans and drawings used by industry to facilitate field application and production.
Course Type: Technical

### WLDG 1428 Introduction to Shielded Metal Arc Welding (SMAW) 4 Credits (2 Lec, 6 Lab)
This is an introduction to the shielded metal arc welding process. Emphasis placed on power sources, electrode selection, oxy-fuel cutting, and various joint designs. Instruction is provided on SMAW fillet welds in various positions.
Course Type: Technical

### WLDG 1430 Introduction to Gas Metal Arc Welding (GMAW) 4 Credits (2 Lec, 6 Lab)
This course covers principles of gas metal arc welding, setup and use of Gas Metal Arc Welding (GMAW) equipment, and safe use of tools and equipment. Instruction provided in various joint designs.
Course Type: Technical

### WLDG 1434 Introduction to Gas Tungsten Arc Welding (GTAW) 4 Credits (2 Lec, 6 Lab)
This is a study of the principles of gas tungsten welding, including setup, GTAW equipment. Instruction is provided in various positions and joint designs.
Course Type: Technical

### WLDG 2406 Intermediate Pipe Welding 4 Credits (2 Lec, 6 Lab)
This is a comprehensive course on the welding of pipe using the shielded metal arc welding (SMAW) process. Welding will be done using various positions. Topics covered include electrode selection, equipment setup, and safe shop practices. Prerequisite or Co-requisite(s): WLDG 2443
Course Type: Technical

### WLDG 2413 Intermediate Welding Using Multiple Processes 4 Credits (2 Lec, 6 Lab)
This course offers instruction using layout tools and blueprint reading with demonstration and guided practices with some of the following welding processes: oxy-fuel gas cutting and welding, shielded metal arc welding (SMAW), gas metal arc welding (GMAW), flux-cored arc welding (FCAW), gas tungsten arc welding (GTAW), or any other approved welding process. Prerequisite or Co-requisite(s): WLDG 2451
Course Type: Technical

### WLDG 2443 Advanced Shielded Metal Arc Welding (SMAW) 4 Credits (2 Lec, 6 Lab)
This course covers advanced topics based on accepted welding codes. Training is provided with various electrodes in shielded metal arc welding with open V-groove joints in all positions. Prerequisite or Co-requisite(s): WLDG 1428
Course Type: Technical

### WLDG 2451 Advanced Gas Tungsten Arc Welding (GTAW) 4 Credits (2 Lec, 6 Lab)
This course covers advanced topics in GTAW welding, including welding in various positions and directions. Prerequisite or Co-requisite(s): WLDG 1434
Course Type: Technical

### WLDG 2453 Advanced Pipe Welding 4 Credits (2 Lec, 6 Lab)
This course covers advanced topics involving welding of pipe using the shielded metal arc welding process. Topics include electrode selection, equipment setup, and safe shop practices, with an emphasis on welding positions 5G and 6G using various electrodes. Prerequisite or Co-requisite(s): WLDG 2406
Course Type: Technical

### WLDG 2455 Advanced Metallurgy 4 Credits (3 Lec, 3 Lab)
This course is an advanced study of metallurgy as it applies to fabrication processes. Includes structure, identification, and testing of metals. Also covers temperature changes and their effect on metals, properties of metals, and factors affecting fabrication of various metals. Course is 96 Contact Hrs.
Prerequisite(s): METL 1401 or department chair approval
Course Type: Technical
WLDG 2480  Cooperative Education Welding  4 Credits  (1 Lec, 28 Lab)
This course covers career-related activities encountered in the student’s area of specialization offered through an individualized agreement among the College, employer, and student. Under the supervision of the College and the employer, the student combines classroom learning with work experience. It includes a lecture component.
Prerequisite(s): Must have Department Chair approval.

Course Type: Technical