WELDING AND MATERIALS TECHNOLOGY (WMT)

WMT F101 Introduction to Welding
4 Credits
Offered As Demand Warrants
Introduction and orientation to the processes and procedures involved in
the welding field including safe operational procedures for shielded metal
arc welding (SMAW) (Stick), mixed inert gas (MIG), tungsten inert gas
(TIG) and oxy-acetylene welding; in addition to the appropriate personal
protective equipment (PPE) and terminology related to the welding
industry.
 Lecture + Lab + Other: 2 + 4 + 0

WMT F102 Intermediate Welding
3 Credits
Continuation of WMT F101.
Prerequisites: WMT F101.
 Lecture + Lab + Other: 2 + 2 + 0

WMT F103 Welding I
3 Credits
Entry-level course in basic oxyacetylene, arc welding and flame cutting.
Attendance at first two classes is mandatory.
 Lecture + Lab + Other: 1 + 4 + 0

WMT F105 Welding II
3 Credits
Arc welding techniques and basic MIG and TIG welding. Attendance at
first two classes is mandatory.
Prerequisites: WMT F103.
 Lecture + Lab + Other: 1 + 4 + 0

WMT F106 Heat Treating/Metal Finishing/Knife Making I
3 Credits
Heat treating, metal finishing. Build two knives, heat treat and
finish.Special Conditions: Must have excellent hand-eye coordination.
Attendance at first class is mandatory.
Recommended: WMT F117, WMT F241.
 Lecture + Lab + Other: 2 + 3 + 0

WMT F117 Oxy-Acetylene Welding and Cutting
3 Credits
Safe oxyacetylene welding techniques and procedures of common
metals. Welding of these metals in flat, horizontal, vertical and overhead
positions. Attendance at first two class meetings is mandatory.
 Lecture + Lab + Other: 2 + 5 + 0

WMT F130 Shielded Metal Arc Welding
1-3 Credits
All positions for multiple pass fillet welds. Study in shielded metal arc
(SMAW) focused on vertical, horizontal, and overhead positions with
multiple passes using different techniques.
Prerequisites: WMT F103; WMT F105.
 Lecture + Lab + Other: 1-3 + 0 + 0

WMT F140 Metal Fabrication
1-3 Credits
Offered As Demand Warrants
Metal fabrication done by hand and with the aid of equipment is the
focus of this class. Plan, layout, bend, form raw metal and fabricate metal
projects. Attendance at first two classes is mandatory.
Prerequisites: WMT F103; WMT F105; WMT F160.
 Lecture + Lab + Other: 1.5 + 5.5 + 0

WMT F150 Gas Tungsten Arc Welding
1-3 Credits
Use of tungsten and argon gas for aluminum and stainless steel gas
welding, formerly called Heliaarc or TIG. This is an entry level gas tungsten
arc welding class concentrating on aluminum. Materials will be welded in
all four welding positions.
 Lecture + Lab + Other: 1.5 + 5.5 + 0

WMT F160 Gas Metal Arc Welding
1-3 Credits
Offered As Demand Warrants
Practices covered include all positions. Gas metal arc welding focuses on ferrous and nonferrous metals welded in all
positions. Attendance at first two classes is mandatory.
 Lecture + Lab + Other: 1.5 + 5.5 + 0

WMT F206 Heat Treating/Metal Finishing/Knife Making II
3 Credits
Second level of knife making and heat treating using more complex
metals and additional equipment. Must have excellent hand-eye
coordination. Attendance at first class is mandatory.
 Recommended: WMT F106; WMT F117; WMT F241.
 Lecture + Lab + Other: 2 + 2 + 0

WMT F210 Pipe Welding
3 Credits
Prepare and weld pipe in an uphill or downhill position.
 Lecture + Lab + Other: 2 + 3.5 + 0

WMT F241 Gas Tungsten Arc and Gas Metal Arc Welding
3 Credits
Entry-level gas tungsten arc welding concentrating on aluminum.
Materials will be welded in all positions. Gas metal arc welding focuses on ferrous and nonferrous metals welded in all positions. Attendance at
first two class meetings is mandatory.
 Lecture + Lab + Other: 1.5 + 5.5 + 0

WMT F290 Welding Proficiency Maintenance
3 Credits
Maintenance of a high degree of welding proficiency through practice
of previously-learned processes with an emphasis on AWS welding
certification standards.
Prerequisites: WMT F130; WMT F140.
 Lecture + Lab + Other: 2 + 4.5 + 0