

Advanced Metal Design Fabrication 40S

Student Course Outline

Swan Valley Regional Secondary

School Instructor- Mr. Hicks

Course Objective:

Upon Completion, the student should be able to identify the various use and handling of Hand tools and Power tools, processes used in welding and describe the safe operation of Oxy acetylene, Shielded Metal Arc Welding (SMAW), and Gas Metal Arc Welding (GMAW). The course will include theory as well as on hands shop experience. The course is 30% Theory and 70% Practical.

Course Requirements

P.P.E. – Safety Glasses, C.S.A Approved Steel toe boots and hearing protection must be worn at all times in the shop. **No exceptions.**

Cell Phone Policy

If a cell phone is visible or audible during class, it will be placed in the lockbox at the front of the room until the end of the period. If this issue persists, the student will be required to either store their phone in their locker or submit it at the beginning of each class.

Shop Rules and Policies

Students Not following the safe work practices outlined in the school and division policies could result in removal from the course/program.

Outline

- A. Review of safe work practices, W.H.M.I.S, fire safety
- B. Oxy-Fuel Equipment
- C. Shielded Metal Arc Welding Equipment
- D. Welding Gases and their uses.
- E. Welding Rods for each process
- F. Metal Forming Equipment
- G. Measuring Techniques
- H. Recondition tools and Techniques
- I. Measuring devices – Examples: Dial indicators, Micrometers, Bore Gauges and measuring tapes.
- J. Oxy-Acetylene Welding and Cutting
- K. SMAW Welding in Flat and Fillets
- L. GMAW in Flat and Fillets welds
- M. Pattern development
- N. Grinding techniques
- O. Reading of Blueprints
- R. Introduction to Milling machine
- S. Fitting and designing of projects
- T. Cleaning of work areas.

Attention will be given for attendance and punctuality

Grading outline

Course Assessment-Marking Scale

- Assignments are required to be handed in on time
- Students who are not excused from exams, tests and quizzes must consult with teacher immediately to arrange an alternate date to complete missed test/quiz or a zero or incomplete may be given.
- Rubric marking scales will be used in practical and project assessment process.

Classwork	20%
Demonstrations	30%
Tests	30%
Projects	20%
Total	100%

Length and time of coverage per subject category may change without notice due to availability of time and resources