Metal Structures

(MS-202)

MARBELLA INSTITUTE OF TECHNOLOGY

Course Utility

Sheet Metal Fabrication issues the knowledge base and skill required to work, maintain and repair sheet metal structures to a professional level.
A wide selection of metal-working processes are explained in detail. They uncover the best techniques used by experienced technicians in the field.

Course Purpose

Sheet Metal Fabrication educates the student thru sequenced steps, working with different metallic structures, materials, dimensions and thicknesses.
Confidence is gained thru the experience of applying the theory into selected projects that are conducted in the LAB.
Special care is taken in safety, tolerances and finish qualities of the work.

Text Book

The course text book '*Professional Sheet Metal Fabrication*' has been written by Ed Barr, a BA degree from the University of South Sewanee (Tennessee) and MA from the University of Kansas.

In 2007 he earned his Bachelor of Science degree in Automotive Restoration Technology thru the McPherson College, where he currently teaches sheet metal restoration and the history of automotive design.

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COURSE OUTLINE

UNIT 1 **Metal working basics**

Class

1 Safety and hand tools
2 Sheet metal machinery
3 Techniques for welding sheet metal
4 Brazing
5 Soldering
6 Riveting
7 Oxy-acetylene cutting
8 Plasma cutting

UNIT 3 **Transforming raw materials**

Class

9 Beginning sheet metal shaping
10 The small gas tank project
11 Advanced sheet metal shaping
12 Building a fender from concept to completion

UNIT 4 **Quality Tips**

Class

13 Straightening
14 Grinding
15 Surface finishing
16 Building a custom pedal car

UNIT 5 **Sheet metal design**

Class

17 Floor plans
18 Rocker panels
19 Rear quarter panels

Unit 6 **Repair processes**

Class

20 Repairing doors
21 Repairing Fenders
22 Repairing Hoods
23 Repairing Trunk lids