_____SOUTH SEATTLE COMMUNITY COLLEGE_____
Technical Education Division

COURSE OUTLINE
Revision: Rodger Squirrell July 14, 2009

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| DEPARTMENT: | Manufacturing Technology |
| CURRICULUM: | Welding Fabrication Technology |
| COURSE TITLE: | Shielded Metal Arc Welding |
| COURSE NUMBER: | WFT 120 |
| TYPE OF COURSE: | Vocational Preparatory |
| COURSE LENGTH: | 1 Quarter |
| CREDIT HOURS: | 5 |
| LECTURE HOURS: | 33 |
| LAB HOURS: | 44 |
| CLASS SIZE: | 25 |
| PREREQUISITES: | Some experience with OAW (“gas welding”) or by instructor permission |

COURSE DESCRIPTION:

A project-oriented set of practical exercises that conveys knowledge of equipment along with theory of operation and applications of the venerable and still-useful Shielded Metal Arc Welding (SMAW) process A.K.A. “Stick Welding”. Mild steel and stainless steel are commonly welded with this process in a variety of industrial applications particularly for maintenance and repair. While somewhat rare, SMAW can be used to join cast iron, bronzes, and aluminum.

STUDENT LEARNING OUTCOMES ADDRESSED:

I. Communication - Communicate and work in groups to complete minimum skills activities.

January , 20, 2003

STUDENT LEARNING OUTCOMES ADDRESSED: (cont.)

2. Personal Responsibility - Tack, production weld, and finish as required for assigned activities. Demonstrate consistent safe work habits including citizenship. Demonstrate consistent quality workmanship per industry standards.
3. Critical Thinking and Problem Solving - Formulate and communicate a plan of action for assigned fabrication and maintenance projects.

GENERAL COURSE OBJECTIVES:

At the end of the course the student will be able to:

1. Identify components of a Shielded Metal Arc Welding station
2. Explain SMAW principles of operation
3. Safely transport, assemble, adjust, and maintain a SMAW station
4. Perform assigned laboratory exercises using SMAW

| TOPICAL OUTLINE | | APPROX. HOURS |
|---|---|---|
| I. | History of SMAW | 0.5 |
| II. | Components of a SMAW system | 1.0 |
| III. | Operating principles of SMAW | 1.0 |
| IV. | Setup & use of SMAW systems | 2.5 |
| V. | Techniques for using SMAW | 72.0 |
| | Total | 77.0 |

Detailed Topical Outline is available separately

REVISED BY: John Todd
DATE: January 20, 2003