



- B. This course meets a program requirement for A.A.S. Automotive Technology,
- C. Course transferability; for New Jersey schools go to the NJ Transfer website, [www.njtransfer.org](http://www.njtransfer.org). For all other colleges and universities go to their individual sites.

## **V. Outline of Course Content**

- A. Safety Rules
- B. Safety Procedures
- C. Protective Equipment
- D. Oxygen-Acetylene Welding
- E. Shielded Metal Arc Welding
- F. Gas Metal Arc Welding (GMAW MIG)
- G. Gas Tungsten Arc Welding (GTAW<TIG)
- H. Plasma Cutting
- I. Welding Terminology

## **VI. Educational Goals and Learning Outcomes**

### **A. Educational Goals**

Students will:

1. identify appropriate welding techniques to solve welding problems (G.E.- RVCC 1; NJ 3)
2. apply quantitative reasoning to welding issues (G.E. - RVCC 7; NJ 2)
3. discuss with others issues involving welding (G.E.- RVCC 2; NJ 1)

### **B. Learning Outcomes**

Students will be able to:

1. write safety rules and procedures
2. explain the use of electric panel controls, fire extinguishers and fire blanket.
3. explain how to safely handle and store gas cylinders.
4. select appropriate welding equipment.
5. explain the use of welding equipment.
6. produce welds in flat, horizontal and vertical positions.
7. produce a proper weld on steel, copper and cast iron.
8. apply safety precautions during vehicle repair.

## **VII. Modes of Teaching and Learning**

- A. lectures
- B. demonstrations
- C. laboratory work
- D. instructional videos/DVDs

## **VIII. Papers, Examinations, and other Assessment Instruments**

- A. laboratory performance
- B. examinations

## **IX. Grade Determinants**

- A. lab performance
- B. examinations
- C. class participation

## **X. Text and Materials**

Suggested Text: Welding: Principles and Applications, latest edition, Larry F. Jeffus, Thomson Publishers.

Please note: The course outline is intended only as a guide to course content and resources. Do not purchase textbooks based on this outline. The RVCC Bookstore is the sole resource for the most up-to-date information about textbooks.

## **XI. Resources**

- A. reference books
- B. welding stations
- C. safety equipment
- D. welding, brazing and cutting equipment
- E. instructional videos/DVDs
- F. welding shop facility in Bridgewater