

**J. Sargeant Reynolds Community College**  
**Course Content Summary**

**Course Prefix and Number: ETR 199**

**Credits: 3**

**Course Title:** Supervised Study in Upgrading and Maintaining PC Hardware

**Course Description (including lecture hours, lab hours, total contacts)**

Teaches upgrading of the system CPU, memory, drives, multimedia components, modem, and video card in a microcomputer. Covers hardware as well as software related maintenance issues. Lecture 2 hours. Laboratory 2 hours. Total 4 hours per week.

**General Course Purpose**

This course is equivalent to ETR 164, which is a required course in the Electronics Technology Career Studies Certificate program.

**Course Prerequisites/Corequisites** (*Entry-level competencies required for enrollment*)

Prerequisite: MTH 2 or equivalent.

**Course Objectives**

Upon successful completion of the course, the student will be able to:

- a. identify microcomputer architecture, major components and terminology.
- b. identify peripherals and storage devices.
- c. demonstrate replacement and or upgrade of microcomputer system devices.
- d. understand and utilize necessary operating system interfaces with replacement devices.
- e. identify and demonstrate basic maintenance practices for microcomputer systems

**Major Topics to be Included**

Microcomputer Maintenance and Upgrade of the following:

- a. System CPU
- b. Memory
- c. Drives
- d. Multimedia components
- e. Modem
- f. Video cards
- g. Interface software
- h. Software maintenance.

**Effective Date of Course Content Summary: August 2008**