

SPRINGFIELD TECHNICAL COMMUNITY COLLEGE

ACADEMIC AFFAIRS

Course Number: ELEC 451 Department: Electrical Engineering Tech.

Course Title: Microprocessor Applications Semester: Spring Year: 1999

Objectives/Competencies

Course Objective	Competencies
<ol style="list-style-type: none">1. To successfully analyze the various types of microprocessors and their construction, programming and operation.2. To have knowledge of and be able to select and operate the appropriate microprocessor based equipment - software and hardware for application and support of industrial manufacturing equipment.3. To gain the basic abilities to program, interface and configure the associated electronics, vision systems, flow systems used in the operation, maintenance and service of industrial microprocessor based systems.4. To gain a basic knowledge of the maintenance, installation, programming and upgrading of various microprocessor controlled system components defined for industrial tasks.	<ol style="list-style-type: none">1. Through lecture, demonstration and associated labs, the student will conduct mental and physical exercises to solve problems and utilize microprocessor trainers to analyze, program and operate control systems to standardized tests.1. Through the use of exams, research, exercises and lab assignments, the student will work to solve both mathematically and functionally the problems presented by the course lectures and texts to the instructor's satisfaction.1. Through the use of exams, exercises and lab assignments, the student will work to solve both mathematically and functionally the problems presented by the course's lectures and texts to standardized tests.1. Through lab experiments, the student will practice various

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<p>5. To provide the student with information and expertise in the area of microprocessor based system troubleshooting and maintenance for a variety of applications utilized in manufacturing.</p>	<p>interfacing, experiment programming and operation techniques to the instructor's satisfaction. The student will also answer related questions on each lab experiment thoroughly and correctly.</p> <p>1. The student will further demonstrate to the instructor's satisfaction, in the lab and on exams, the ability to discover the system faults and repair them to operate correctly.</p>