COURSE INFORMATION FORM

DISCIPLINE        INTE
COURSE TITLE      Programmable Logic Controller Capstone

CR.HR          4  LECT HR.   2  LAB HR.   4  CLIN/INTERN HR.  _______  CLOCK HR.  _______

CATALOG DESCRIPTION
This course will assist the student in developing and creating documentation to support a portfolio to present to prospective employers. The student will use the skills they have acquired in previous classes to convert several Motor Control relay logic systems to the most current PLC programming software. They will create safety procedures to use in the workplace related to Programmable Logic Controllers. The student will learn how to use function block diagram programming in PLC’s.

PREREQUISITES
INTE 277 or concurrent enrollment

EXPECTED STUDENT OUTCOMES IN THE COURSE
Upon completion of this course, the student will be able to:
1. Use and document safe work practices with PLCs.
2. Convert Motor Control Logic to PLC program.
3. Describe the operation of multiple PLC systems.
4. Create electrical schematics for PLC programs.
5. Create a portfolio for prospective employers.
6. Create Function Block diagram programs using PLC software.
CLASS-LEVEL ASSESSMENT MEASURES
Student accomplishment of expected student outcomes will be assessed using the following measures. (Identify which measures are used to assess which outcomes.)

Written Test:
Outcomes 1, 3, 4, 5 & 6

Practical Test:
Outcomes 1 - 6

PROGRAM-LEVEL OUTCOMES ADDRESSED

General Education Outcomes
Specify which general education outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes and assessment measures.

Occupational Program Outcomes
Specify which occupational program outcomes, if any, are substantially addressed by the course by completing the “Course/Program Assessment Matrix” to show the relationship between course and program outcomes to assessment measures.
Individual instructors may order this outline as fits the needs of their individual courses. In addition, they may place more emphasis on some areas than on others. What is assured is that this particular list is covered in the course. Other topics may be added to a course as the instructor sees fit, and as time and interest allow. An *asterisk can be used to mark an item as optional.

I. Safety
   A. Safety procedures
   B. Safe work practices

II. Advanced Programming skills
   A. Function Block programming
   B. Ladder logic programming

III. Motor Control Relay Logic
   A. Convert relay logic systems to latest PLC ladder logic
   B. Convert relay logic systems to function block diagram logic

IV. Prints
   A. Create electrical schematics for programs
   B. Create documentation for PLC programs

V. Portfolio
   A. Resume
   B. Electronic copy of PLC programs
   C. Hard copy of relay logic
   D. Hard copy of PLC programming
   E. Safety procedures