Mohawk valley community college  
Utica and Rome New York

ET105 Computer Control Fundamentals

1. COURSE DESCRIPTION:

ET 105 Computer Control Fundamentals C-1 P-2 Cr-2

This introductory course covers the personal computer and its software for electrical service technicians. It includes a survey of fundamental personal computer hardware: the keyboard, microprocessor, mouse, disk drives, and printers. It introduces DOS and Windows operating systems and hands-on experience with software packages such as word processing and spreadsheets. It concludes with an introduction to BASIC, which is used to solve practical problems in the electrical/ electronic field. (Fall Semester)

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Co-requisite: None

1. STUDENT LEARNING OUTCOMES:

The student will be able to:

1. Demonstrate an elementary understanding of, and proficiency in, the operation of a typical personal computer.
2. Identify the hardware components of the computer and the two types of software (operating system and application) and the differences.
3. Create and edit documents in word processors and spreadsheets.
4. Compose a concise and professional email considering the purpose and audience.
5. Operate a Simulated GUI while detecting and reporting errors
6. Recognize that all data has randomness in it and describe different ways of handling it.
7. Describe how Smart Devices communicate over networks
8. Search the internet to locate information and evaluate web sites for research.
9. Identify basic cybercrimes, computer viruses and methods of computer protection.
10. Describe the basic parts of a program and explain the importance of giving and following instructions.
11. Write and execute a simple program which will include at least two variables, one branching function, and one output

MAJOR COURSE TOPICS:

1. Introduction – Survey of baseline knowledge
2. Understanding what's inside computers - software
3. Understanding what's inside computers - hardware
4. Binary numbers and computers
5. Career Services Presentation: Resume
6. The Internet and how it works
7. Searching the Internet effectively
8. Midterm Exam
9. The Internet of Things (IoT)
10. Statistics for Quality Control
11. Basics of Programing
12. Introduction to cybercrime and computer viruses
13. Protecting your digital assets from hackers and yourself
14. Final Exam
15. LABORATORY TOPICS:
16. Course Intro, Group Discussion
17. Navigating the Operating System
18. Simulated GUI – Problem Report
19. Word Projects – Format Report
20. Word Projects - Resume
21. Internet Research
22. Outlook Project
23. Excel Projects – Basic formulas and formatting
24. Excel Projects – Graph Data
25. Excel Projects – Analyze Data
26. Word Project – Embedding Excel
27. Programming Projects
28. Programming Projects
29. Finish outstanding work

**COURSE NAME: ET127 Modern Industrial Practices/ET 105 Computer Control Fundamentals**

## **DATE FACULTY NAME CHANGE INPUT MEASUREMENT ASSESSMENT ACTION**

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| --- | --- | --- | --- | --- | --- | --- |
| **2/1/14** | **R.C. Decker** | **New Outline for Proposed Course** | **Industry and Grant Activity** | **Course review and adaptation** |  |  |
| **1/21/16** | **M Higgins** | **Add disclaimers** | **College Requirements** |  |  |  |
| **4/20/17** | **M Higgins** | **Add detail to course outline** | **College Requirements** |  |  |  |
| **8/17/16** | **M. Higgins** | **Reformat Course Outline and Schedule** | **From Sybil web page** |  |  |  |
| **8/17/19** | **M Higgins** | **Update CRNs, Sec #’s** | **SIRS** |  |  |  |
| **8/17/20** | **M Higgins** | **Update CRNs, Sec #’s** | **SIRS** |  |  |  |
| **8/22/21** | **M Higgins** | **Update CRNs, Sec #’s** | **SIRS** |  |  |  |
| **12/14/23** | **B Dubeck** | **Tweak Course Content** | **Industry input** |  |  |  |
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