Mohawk valley community college  
Utica and Rome New York

ET105 Computer Control Fundamentals

1. COURSE DESCRIPTION:

ET 105 Modern Industrial Practice C-2 P-2 Cr-2

This introductory course covers the personal computer (PC) and its software for electrical service technicians. It includes a survey of fundamental PC hardware, and how networks are used in business. It introduces computer operating systems and hands-on experience with software packages such as word processing and spreadsheets. It concludes with an introduction to programming, as used to solve practical problems in the electrical/electronic field.

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1. Co-requisite:

Co-requisite: ￼None

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

# **COURSE NAME: \_\_\_\_\_ET127 Modern Industrial Practices**\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

## **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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