Waldo County Technical Center
Waldo, Maine

Computer Careers

Course Number:	CC1	**Course Title:**	Computer Careers
Credit Hours:	3	**Clock Hours:**	Mon-Fri 11:45-1:45
Instructor:	Jeremiah Johnson	**Room:**	Computer Careers
Office Hours:	N/A	**Voice Mail:**	207-342-1314
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Text:

Testout PCPro Online Curriculum - (9th grade reading level)

Testout Windows ClientPro Online Curriculum - (9th grade reading level)

EngradePro Online Gradebook

A+ Guide to IT Technical Support - Jean Andrews - 9th edition (9th grade reading level)

Suggested Supplies: Access to the Internet,

Pre/Corequisite: Keyboarding, Ability to read, comprehend, and write at a high school level, Intermediate computer proficiency (including file management). Lexile Reading at 1000 or higher is recommended due to the technical nature of the Material and Textbooks (9th grade reading level). Understanding of basic algebraic concepts. Ability to work independently for a two hour block. Ability to follow multi-step directions. Attention to detail and fine motor skills. Good attendance, as new subject material is introduced daily. The ability to work with in groups and provide professional, courteous customer service. Understanding and adherence to standards of professionalism and lab safety

Course Description:

The Computer Careers Course provides an introduction to Computer Technology and the impact Computers have on everyday life. The Computer Industry is changing and available jobs are changing as well. New IT industry skills are becoming the standard for Technology Jobs. We spend the Year preparing for the PC Pro and A+ certifications in Computer Hardware and Operating systems. Other certifications are available along the way including OSHA 10 Hour General Industry and Ladder Safety.

Course Objectives

This course is designed to:

- · Introduce students to hardware & software skills needed to work in computer technology careers
- · Encourage students to explore computer technology career options, education, and certifications
- · Develop skills for obtaining employment through portfolio, interview, and demonstration activities
- · Provide students with the necessary skills to sit for the CompTIA A+ and PCPro Industry Certifications

Course Activities

This course will include:

1. Lectures and lab projects to be conducted during meeting times
2. Quizzes covering the concepts and information derived from current sections of course material
3. Homework assignments consisting of research or text book questions
4. Lab design projects involving teams or individuals using client & server operating systems to perform common network design configurations
5. Participation in a live work scenario to support the School IT needs.

Unit Topical Outline

1. COMPUTING OVERVIEW
   1.1 Course Introduction, 1.2 Using the Simulator, 1.3 Hardware Basics, 1.4 Windows Basics, 1.5 Linux Basics, 1.6 Mac OS Basics
2. PC TECHNICIAN
   2.1 Protection and Safety, 2.2 Professionalism, 2.3 PC Tools, 2.4 PC Maintenance, 2.5 Troubleshooting Overview
3. SYSTEM COMPONENTS
   3.1 Cases and Form Factors, 3.2 Power Supplies, 3.3 Motherboards and Buses, 3.4 Motherboard Troubleshooting, 3.5 Processors, 3.6 Processor Troubleshooting, 3.7 Memory, 3.8 Memory Installation, 3.9 Memory Troubleshooting, 3.10 BIOS/UEFI, 3.11 Expansion Cards, 3.12 Video, 3.13 Audio, 3.14 Cooling
4. PERIPHERAL DEVICES
   4.1 Peripheral Devices, 4.2 USB, 4.3 IEEE 1394 (FireWire), 4.4 Display Devices, 4.5 Video Troubleshooting, 4.6 Device, Driver Management, 4.7 Device Driver Troubleshooting
5. STORAGE
   5.1 Storage Devices, 5.2 SATA, 5.3 Optical Media, 5.4 RAID, 5.5 File Systems, 5.6 File System Creation, 5.7 Storage, Management, 5.8 Storage Spaces, 5.9 Disk Optimization, 5.10 Storage Troubleshooting
6. NETWORKING
   6.1 Networking Overview, 6.2 Network Hardware, 6.3 Networking Media, 6.4 Ethernet, 6.5 IP Networking, 6.6 IP Configuration, 6.7 IP version 6, 6.8 802.11 Wireless, 6.9 Infrared, Bluetooth, and NFC, 6.10 Internet Connectivity, 6.11 SOHO Configuration, 6.12 Network Utilities, 6.13 HomeGroup Networking, 6.14 Network Troubleshooting
7. PRINTING
   7.1 Printers, 7.2 Printer Configuration, 7.3 Network Printing, 7.4 Printing Management, 7.5 Printer Maintenance, 7.6 Printer Troubleshooting
8. MOBILE DEVICES
   8.1 Notebook Computers, 8.2 Notebook Components, 8.3 Notebook Power Management, 8.4 Notebook Troubleshooting, 8.5 Mobile Devices, 8.6 Mobile Device Networking, 8.7 Mobile Device Security, 8.8 Mobile Device Troubleshooting
9. SYSTEM MANAGEMENT
   9.1 Windows System Tools, 9.2 Preferences and Settings, 9.3 Performance Monitoring, 9.4 Users and Groups, 9.5 Remote Services, 9.6 Windows Application Management, 9.7 Linux Application Management, 9.8 Digital Content Management, 9.9 Updates, 9.10 System Backup, 9.11 System Protection, 9.12 System Recovery, 9.13 Virtual Memory, 9.14 Operating System Troubleshooting, 9.15 Windows Boot Errors
10. SYSTEM IMPLEMENTATION
    10.1 Component Selection, 10.2 Windows Preinstallation, 10.3 Windows Installation, 10.4 Post Installation, 10.5 Virtualization
11. FILE MANAGEMENT
    11.1 Windows File Locations, 11.2 Managing Files on Windows, 11.3 NTFS Permissions, 11.4 Shared Folders, 11.5 Linux File Management
12. SECURITY
    12.1 Best Practices, 12.2 Incident Response, 12.3 Physical Security, 12.4 Social Engineering, 12.5 BIOS/UEFI Security, 12.6 Malware Protection, 12.7 Authentication, 12.8 File Encryption, 12.9 Network Security, 12.10 Firewalls, 12.11 Proxy Servers, 12.12 VPN, 12.13 Security Troubleshooting
13. SAFETY
    OSHA 10 Hour General Industry, Ladder Safety
14. ROBOTICS
    Lego EV3 Platform, Arduino, Roomba, USB Control
15. PROGRAMMING
    HTML, Scripting, Code.org, Game Development using various tools, EV3 Programming

Evaluation Basis:

a. **Assignments** **60%**
b. **Attendance** **20%**
c. **Service Calls** **20%**

Policies on Course Grading:

- Exams will be delivered over the Internet using a course management utility.
- Each online exam will have a generous yet strictly adhered to closing date.
- **Failure to complete the exam by the closing date will result in a ZERO for that exam.**
- The final exam will be delivered in a proctrored environment and the ability to use notes or books will not be allowed.

Lab Grading and Policy:

- All lab projects will be done individually or with a maximum of two per team.
- Lab projects will be collected on due date and graded for accuracy and content based upon the following:

√++ = 100 points	Responses are clear and well written / data is accurate / work is complete = Skilled in task.
√+ = 90 points	Responses are clear / minor errors in data collection / work is complete = Proficient in task.
√ = 80 points	Responses are vague or missing / errors in data collection / work is complete = Partly skilled in the task.
√- = 70 points	Responses are vague or missing / errors in data collection / work is incomplete = Unskilled in task.
√-- = 60 points	Work is submitted, but meets only minimal standards for submission = Unskilled in task.
0 points	Lab procedure is incomplete / lab not submitted / lab is not accepted beyond due date.

WCTC Grading Scale:

Letter	Grade Point	Scale
A+		98-100
A		95 – 97.9
A-		93 – 94.9
B+		90 – 92.9
B		87 – 89.9
B-		85 – 86.9
C+		82 – 84.9
C		79 – 81.9
C-		77 – 78.9
D+		75 – 76.9
D		72 – 74.9
D-		70 – 71.9
F		Below 70

Attendance Policy:

WCTC believes that regular and prompt attendance at each class session is extremely important. It is also the School's belief that excessive absenteeism and/or lateness reflect negatively upon student reliability and the School's ability to provide quality references to potential employers.

If the total number of legitimate absences is extensive, it may be impossible for the student to meet the objectives of the course. In such instances the instructor may assign a grade of Incomplete (I).

Lab Behavior:
Computer Careers is a course that requires the attention of students without distractions from others. You will not use personal electronic devices in the classroom in a manner that disrupts the instructor or other students! Examples include cell phones, radios, computer entertainment, or media devices. You will be asked to stop using these devices if in the judgment of the instructor your use of these devices is inappropriate.

Academic Honesty:
WCTC students are expected to be honest and forthright in their academic endeavors. Cheating is an act of deception by which a student misrepresents that he/she has mastered information on an academic exercise that he/she has not mastered. Items submitted for evaluation must represent your own work.

It is expected that you will make use of any resources available to you as become proficient in the course objectives. However, it is academically dishonest to represent the work of others as your own. Computer Careers requires program code development projects where it is permissible to use code developed by others, but the source of the code must be attributed. Additionally, you are expected to modify the code to meet the customized requirements of course projects. Any departure from academic honesty will be dealt with according to procedures outlined in the WCTC student handbook.