A+ CERTIFICATION/1 (180 Hours)

Course No.: 74-15-50

COMPETENCY CHECKLIST

Student Name _____

Teacher Name _____ School Site _____

Start Date _____ Completion Date _____ Certificate Date_____

Teacher Signature _____ Student Signature _____

(Signatures verify completion of course competencies)

A. ORIENTATION AND SAFETY (5 hrs)
_____ 1. Scope and purpose of course
_____ 2. Class as part of Linked Learning Initiative
_____ 3. Classroom policies and procedures
_____ 4. Class/workplace emergency procedures
_____ 5. Occupations available to comp. technicians
_____ 6. Opportunities for gender equity/non-trad
_____ 7. EPA legislation and engineering industry
_____ 8. EPA standards for hazardous waste disposal
_____ 9. MSDS in computer technology industry
_____ 10. Sustainable and green building practices
_____ 11. OSHA rules and regulations for industry
_____ 12. Employer/employee responsibility to safety
_____ 13. Safety test

B. RESOURCE MANAGEMENT (2 hrs)
_____ 1. Define listed terms related to topic
_____ 2. Basic principles of resource management
_____ 3. Effective use of tools, equipment, materials
_____ 4. Effective management in computer repair
_____ 5. Economic benefits of managing resources

C. COMPUTER MATH (10 hrs)
_____ 1. Application of practical math in engineering
_____ 2. Powers of ten and decimal number system
_____ 3. Metric/engineering prefixes used in comps
_____ 4. Binary number system
_____ 5. Conversion of decimals to binary numbers
_____ 6. Conversion of binary numbers to decimals
_____ 7. Hexadecimal numbers
_____ 8. Conversion of decimals to hexadecimals
_____ 9. Conversion of hexadecimals to decimals
_____ 10. Conversion of hexadecimals to binary #s
_____ 11. Conversion of binary #s to hexadecimals
_____ 12. ASCII Code

_____ 13. Pass written exam with 80% or higher score

D. HARDWARE: STORAGE DEVICES (15 hrs)
_____ 1. Features/functions of storage/backup devices
_____ 2. Installation/testing of storage/backup devices
_____ 3. Pass written exam with 80% or higher score

E. HARDWARE: MOTHERBOARD (25 hrs)
_____ 1. Features/functions: Motherboard components
_____ 2. Installation/testing: Motherboard components
_____ 3. Pass written motherboard exam

F. HARDWARE: POWER SUPPLY (20 hrs)
_____ 1. Law of electromagnetism/Ohm's Law
_____ 2. Laws applied to circuits
_____ 3. Basic soldering techniques
_____ 4. Digital multimeter
_____ 5. Power conditioners/uninterruptible supplies
_____ 6. Preventing loss of data/damage to hardware
_____ 7. Types of power supplies
_____ 8. Surge protectors and power strips
_____ 9. Voltage measurement of devices
_____ 10. Preventive maintenance and ESD
_____ 11. Pass written test with 80% or higher score

G. HARDWARE: CENTRAL PROCESSING SYSTEM (20 hrs)
_____ 1. Features/functions of types of CPUs
_____ 2. Characteristics of CPUs
_____ 3. Cooling devices and methods
_____ 4. Features/functions of various memory types
_____ 5. Characteristics of memory

H. HARDWARE: DISPLAY SERVICES (15 hrs)
_____ 1. Features/functions of various display devices
_____ 2. Characteristics of LCD technologies
_____ 3. Feature/functions Display device connectors

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_____ 4. Settings for display devices
_____ 5. Installing/testing: Display device connections
_____ 6. Pass written exam with 80% or higher score

I. <u>**HARDWARE: PERIPHERALS AND INPUT DEVICES**</u> (15 hrs)
_____ 1. Features/function: Peripherals/input devices
_____ 2. Installation/configuration of peripherals
_____ 3. Pass written exam with 80% or higher score

J. <u>**HARDWARE: ADAPTER CARDS**</u> (10 hrs)
_____ 1. Features/functions of types of adapter cards
_____ 2. Installation/testing of types of adapter cards
_____ 3. Pass written exam with 80% or higher score

K. <u>**HARDWARE: LAPTOP**</u> (20 hrs)
_____ 1. Features/functions of expansion devices
_____ 2. F/F of communication connections
_____ 3. F/F of power and electrical input devices
_____ 4. Installation/testing of laptop devices
_____ 5. Pass written exam with 80% or higher score

L. <u>**HARDWARE: PRINTERS**</u> (15 hrs)
_____ 1. Features/function of printer types
_____ 2. Local versus network printers
_____ 3. Compatibility of printer drivers
_____ 4. Consumables as related to printers
_____ 5. Installation/testing of various printer types
_____ 6. Pass written exam with 80% or higher score

M. <u>**EMPLOYABILITY SKILLS**</u> (8 hrs)
_____ 1. Employer requirements in an employee
_____ 2. Identify potential employers in job search
_____ 3. Electronic social networking in the job search
_____ 4. Sample resume and cover letter
_____ 5. Accurate/legible/complete job application
_____ 6. Common mistakes made on applications
_____ 7. Complete sample job application
_____ 8. Enthusiasm for job
_____ 9. Appropriate appearance on job
_____ 10. Continuous upgrading of job skills
_____ 11. Customer service to establish relationships
_____ 12. Appropriate interview techniques
_____ 13. Resources to use for successful interview
_____ 14. Sample follow-up interview letters
_____ 15. Appropriate follow-up procedures