Computer Repair and Troubleshooting III

Career Cluster: Information Technology

ODCTE Division: Trade and Industrial Education

Course Number: TBA

Locations: Oklahoma *Career*Tech locations

Length: 120 Hours

Course Description: This course is an intensive hands-on, assignments, and research based Learning. The students must have successfully completed two years of computer assembly and repair and have instructors' approval before enrolling in this course.

Knowledge and Skills:

Computer Installation, Evaluation, Troubleshooting and Upgrades – 90 hrs	
Advanced Computer Configuration	Advanced Computer Properties
Desktop and Taskbar Customization	Plot parameters
Advanced Hardware	Utilities Development
Networking	Software Customization
Configure CAD workstation	Customize application software
Storage devices	Symbols, text based information, and libraries
System Configuration	Subsystems
I/O systems	Hardware, software used to troubleshoot
Identify and assemble equipment, subassemblies and peripherals with blueprints and diagrams	CPU's, Multiple CPU systems, Storage devices, Display systems,
Input and Output devices	Power systems
Computer Equipment Compatibility	Proper components
Utilize Fasteners and terminals	Utilize and infinity various types and sizes of screws
Utilize notations and symbols	Power supplies

Trace signal/power flow	Identify sources of power
Utilize Ohms law	Utilize DMM
Properties of a signal	Magnetic properties of devices
Utilize codes and arithmetic, binary, hexadecimal numbers	Utilize digital technicques
Utilize Digital, Fiber optic, Wireless, Analog systems	Utilize mathematic equations to solve and troubleshoot problems
Use of hand tools and polarity tester	Utilize cable tester
Utilize conductors and insulators	Batteries and storage devices
Utilize static-sensitive devices	Network systems
Configure networks and interface cards	Network software and hardware
Computer Cables	Custom installations
Setting adjustments	Backups
Permissions	Data Applications.
Utilization of Malware	Internet structure
Internet types and services	Internet Terminology
Internet utilization	Utilization of e-mail and ftp concepts
Computerized Data Control – 10 hrs	
Work orders, logbooks and historical records	Research, Order
Measuring instruments	Calibration
Site Conditions	Bill of materials
Computer Employability Requirements – 20 hrs	
Computer Dexterity Requirements	Proper Injuries/accidents procedures
Computer Electrical safety	Knowledge of governmental regulations
Knowledge of environmental conditions as related to the computer. (i.e. hazardous waste disposal)	Utilization of thermal and laser products safely.
Appropriate office conduct (proper attitude, respectfulness, teamwork, interpersonal & communication skills, attendance, etc.)	Data Management
Understanding of written & oral instructions	Depth of knowledge recall and applicability of computer concepts
Time Management Skills	Technical writing

Required Certifications:	None
Course Standards:	Microcomputer Repair and support skills standards ODCTE
	CompTIA A+ OS
Resources:	Test Out Software – Core & OS
	Self-Test Software
	Marcraft A+
	Introduction to Operating Systems: A survey Course, 2nd edition, Mary Gorman & Todd Stubbs-Thomson Course Technology
	All in one A+ Certification by Mike Meyers, 4th edition, McGraw Hill (Osborn)
	Networking Basics, 2nd edition by Ciampa – Thomson Course Technology