



WESTERN MONTGOMERY CAREER AND TECHNOLOGY CENTER

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Serving the Pottsgrove, Spring-Ford and Upper Perkiomen School Districts

Computer Information Systems Syllabus

CIS Teacher – Mr. Michael Burch

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Room: B107

Purpose of the Course:

The purpose of this course is to provide students with the knowledge and skills necessary to design, implement, and manage computer networks. This course covers a range of topics related to network architecture, protocols, technologies, security, and management.

Specific Objectives

- Hardware: Identify, install, and configure computer components and peripherals.
- Mobile Devices: Understand mobile device hardware and software, and install and configure devices.
- Hardware and Network Troubleshooting: Troubleshoot and resolve hardware and software issues, including network connectivity problems.
- Security: Identify and implement basic security protocols and procedures, and secure workstations and mobile devices.
- Network Access: Understand and configure network access protocols such as Ethernet and Wi-Fi.
- IP Connectivity: Configure and troubleshoot routing and switching protocols, including IP, DHCP, and NAT.
- IP Services: Configure and troubleshoot network services such as DNS and DHCP.
- Security Fundamentals: Understand and implement basic network security protocols, such as access control lists and firewalls.
- Automation and Programmability: Understand the basics of network automation and programmability.

Uniform & Safety Requirements:

DRESS REQUIREMENTS:

- Dress in business casual or smart casual attire. This means collared shirts, slacks, skirts, or dresses. Avoid wearing shorts, t-shirts, or athletic wear unless specifically instructed otherwise.
- Wear comfortable shoes suitable for walking and standing, as you may need to move around the classroom or lab.
- Avoid excessive jewelry or accessories that may be distracting or noisy.
- Make sure your clothing is clean and in good condition.

- Please refrain from wearing clothing that exposes your midriff or shoulders to maintain a professional and respectful classroom environment.
- If you are unsure about the dress code, check with the instructor.

MATERIALS & TOOLS:

- Pencil/Pen
- An email address that is valid and checked regularly.
- Laptop/Computer for homework. Chromebooks are not compatible with all software used in class.
- Way to save work. Cloud storage options are preferred but USB storage will be fine.
- [Tool kit like this one is recommended but not a requirement. \(Does contain sharp objects.\)](#)

Teacher Expectations:

All assigned work is to be turned in on the due date for full credit. Assignments are available in the LMS. Students may also access Skyward to view future assignments.

Schedule of Topics:

Year 1 Quarter 1	TestOut ITF+ 1.2 - 4.3 -IT Basics -Hardware -Software
Year 1 Quarter 2	TestOut ITF+ 4.4 - 6.2 -Software Cont -Internet Technology -Networking
Year 1 Quarter 3	TestOut ITF+ 6.3 - 8.4 -Networking Cont -Databases -Programming
Year 1 Quarter 4	TestOut 8.5 - 11.3 -Programming Cont -Information Systems -Cyber Security -IT Careers
Year 2 Quarter 1	CompTIA A+ 220-1101 -Introduction to Personal Computer Hardware/Assembly -Advanced Computer Hardware -Preventive Maintenance and Troubleshooting -Networking Concepts -Laptops and Other Mobile Devices -Printers -Virtualization and Cloud Computing
Year 2 Quarter 2	CompTIA A+ 220-1102 -Windows Installation -Windows Configuration -Mobile, Linux, and macOS Operating Systems -Security

	-Careers Introduction to Networks -Basic Network Connectivity and Communications
Year 2 Quarter 3	Introduction to Networks -Basic Network Connectivity and Communications (Cont) -Ethernet Concepts -Communicating Between Networks
Year 2 Quarter 4	Introduction to Networks -IP Addressing -Network Application Communications -Building and Securing a Small Network
Year 3 Quarter 1	Switching, Routing and Wireless Essentials -Switching Concepts and VLANs -Redundant Networks -Available and Reliable Networks
Year 3 Quarter 2	Switching, Routing and Wireless Essentials -L2 Security WLANs -Routing Concepts and Configuration
Year 3 Quarter 3	Enterprise Networking, Security and Administration -OSPF Concepts and Configurations -Network Security -WAN
Year 3 Quarter 4	Enterprise Networking, Security and Administration -Optimize, Monitor, and Troubleshoot Networks -Network Virtualization and Automation
Year 4 Quarter 1	
Year 4 Quarter 2	
Year 4 Quarter 3	
Year 4 Quarter 4	

Important Classroom/School Rules:

Students should maintain respect for all staff members, classmates, and school property. Classroom area is to be kept clean at all times. No horse play or games shall be tolerated. Refer to the student handbook for complete guidelines.

Career & Technical Student Organizations:

Skills USA