



Butler Tech Programming Software Development Essential Skills Profile

This profile provides an outline of the skills required for the successful completion of this career program. Additional information is located on the Butler Tech website at: <https://www.butlertech.org/high-school/> and selecting the corresponding career program.

Skills

Critical Thinking	Using logic and reasoning to identify the strengths and weaknesses of alternative solutions, conclusions or approaches to problems.
Active Listening	Giving full attention to what other people are saying, taking time to understand the points being made, asking questions as appropriate, and not interrupting at inappropriate times.
Judgment and Decision Making	Considering the relative costs and benefits of potential actions to choose the most appropriate one.

Knowledge Required in Programming Software Development

Document all aspects of formal design, using mock-up screenshots, sample menu layouts, flowcharts, and other graphical devices.	Create and manage documentation, schedules, goals, and communication plans in collaboration with the team.
Conduct regular design reviews throughout the development process.	

Available Certifications

CompTIA IT Fundamentals (6 Points)	CompTIA A+ (6 Points)
Plus 1 year certificate as you attend Cincinnati State	Additional credentials may be available based on skill.

Possible Career Pathways

Computer Service Technician	Cable installer
Network Administrator	Web Designer/Developer
Applications Specialist	Programmer
IT Manager	Entrepreneur
Help Desk	Cloud Engineer
Program Manager	Military IT
Game Design	Cybersecurity Analyst

Programming Software Development Activities

- Back up data.
- Configure security settings or access permissions for groups or individuals.
- Analyze and report computer network security breaches or attempted breaches.
- Identify the causes of networking problems, using diagnostic testing software and equipment.
- Document network support activities.
- Configure wide area network (WAN) or local area network (LAN) routers or related equipment.
- Install network software, including security or firewall software.
- Evaluate local area network (LAN) or wide area network (WAN) performance data to ensure sufficient availability or speed, to identify network problems, or for disaster recovery purposes.
- Troubleshoot network or connectivity problems for users or user groups.
- Provide telephone support related to networking or connectivity issues.
- Analyze network data to determine network usage, disk space availability, or server function.
- Perform routine maintenance or standard repairs to networking components or equipment.
- Configure and define parameters for installation or testing of local area network (LAN), wide area network (WAN), hubs, routers, switches, controllers, multiplexers, or related networking equipment.
- Install new hardware or software systems or components, ensuring integration with existing network systems.
- Test computer software or hardware, using standard diagnostic testing equipment and procedures.
- Install or repair network cables, including fiber optic cables.
- Monitor industry websites or publications for information about patches, releases, viruses, or potential problem identification.
- Create or update technical documentation for network installations or changes to existing installations.
- Train users in procedures related to network applications software or related systems.
- Test repaired items to ensure proper operation.
- Install and configure wireless networking equipment.
- Maintain logs of network activity.
- Document help desk requests and resolutions.
- Research hardware or software products to meet technical networking or security needs.
- Create or revise user instructions, procedures, or manuals.
- Run monthly network reports.

Possible College Credits

College Credit Plus in English, Math, Social Studies, or Science	Must be preapproved. Must pass a college course at an Ohio college or College Credit Plus class at Butler Tech.
Career Technical Credit Transfer	<p>The Ohio Transfer to Degree Guarantee helps career and technical students transfer credits earned in high school to community college or four-year degree programs. The credit can be used at any Ohio public college or university:</p> <ul style="list-style-type: none">• If you successfully completed your career-technical program and passed certain required assessments.• If you attend a similar program at a public Ohio college or university. <p>For more information, go to www.transfercredit.ohio.gov</p>
Articulated Credit	Butler Tech has agreements with certain colleges; if you attend one of those colleges, you can get credit toward a specific degree.

*Additional college or post-secondary education may be required in this field