

## Technical Competencies Rubric

\*Note: not all competency areas will be evaluated in the project.

| Competency Area  | Excellent (4)   | Proficient (3)  | Basic (2)   | Novice (1)   | Not Evaluated (0) |
|--|---|---|---|--|-------------------|
| <b>Basic Principles of Information Technology Concepts, Systems, Platforms &amp; Tools</b> | Demonstrates a deep understanding of IT concepts, systems, platforms, and tools, effectively relating them to IT professional roles.                                  | Displays a solid grasp of fundamental IT concepts and their relevance to IT professional roles.   | Shows a basic understanding of IT concepts and their connection to IT professional roles.   | Exhibits limited understanding of IT concepts and their relevance to IT professional roles.                                  |                   |
| <b>Security</b>  | Proficiently identifies and describes various network threats, including malware, firewall, IDS, and IPS. Demonstrates a strong understanding of security principles. | Recognizes and describes basic network threats, including malware, firewall, IDS, and IPS. Shows a good understanding of security principles.   | Identifies some network threats but struggles to describe them accurately. Displays a limited understanding of security principles.           | Struggles to identify or describe network threats and lacks a clear understanding of security principles.                    |                   |
| <b>Logic &amp; Fundamentals of Computer Languages</b>                                      | Builds complex web applications effectively, demonstrating a deep understanding of how computer languages communicate.  | Constructs basic applications, showcasing a good grasp of how computer languages communicate.   | Develops rudimentary applications but lacks sophistication.   | Attempts to build applications, with limited success in communication between computer languages.                            |                   |
| <b>Routing &amp; Network Configuration</b>   | Clearly explains the purpose of routing, network configuration, and monitoring using common networking protocols.   | Adequately articulates the purpose of routing, network configuration, and monitoring, with a good understanding of common networking protocols. | Provides a basic explanation of routing, network configuration, and monitoring, but lacks depth in understanding common networking protocols. | Offers a vague explanation of routing, network configuration, and monitoring and struggles with common networking protocols. |                   |
| <b>User &amp; Customer Support</b>   | Skillfully uses a range of services to provide comprehensive technical support, assisting users effectively in implementing and resolving IT-related problems.        | Utilizes a variety of services to provide technical support, effectively aiding users in implementing and resolving IT-related issues.          | Uses some services for technical support but lacks depth in assisting users with IT-related problems.   | Utilizes limited services for technical support and provides minimal assistance to users with IT-related issues.             |                   |

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|---|--|---|--|--|--|
| <b>Basic Principles of Hardware</b>                   | <p>Expertly describes the purpose and function of various communication systems hardware components (e.g., end user devices, switches, routers, wireless access points).</p>                                   | <p>Clearly articulates the purpose and function of communication systems hardware components.</p>   | <p>Provides a basic description of communication systems hardware components but lacks depth.</p>  | <p>Offers a vague explanation of communication systems hardware components and their functions.</p>  |  |
| <b>Risk Management &amp; Information Assurance</b>    | <p>Demonstrates a strong understanding of information security standards and applications, effectively protecting the confidentiality, integrity, and availability of information and information systems.</p> | <p>Exhibits good knowledge of information security standards and applications, ensuring the protection of information and information systems.</p>        | <p>Shows a basic understanding of information security standards and applications but may have gaps in protecting information and systems.</p> | <p>Demonstrates limited knowledge of information security standards and applications, resulting in inadequate protection of information and systems.</p> |  |
| <b>Basic Principles of Software Development</b>       | <p>Expertly manages and maintains software, demonstrating a deep understanding of designing, writing, testing, and maintaining source code of computer programs.</p>   | <p>Proficiently manages and maintains software, with a solid grasp of designing, writing, testing, and maintaining source code of computer programs.</p>  | <p>Manages and maintains software at a basic level but may lack sophistication in some aspects of software development.</p>                    | <p>Struggles to manage and maintain software effectively, with limited understanding of software development principles.</p>                             |  |
| <b>Networks</b>                                       | <p>Skillfully facilitates communication between people and computer systems using hardware and software, demonstrating an in-depth understanding.</p>  | <p>Effectively facilitates communication between people and computer systems using hardware and software.</p>   | <p>Facilitates communication between people and computer systems at a basic level but may lack sophistication in some aspects.</p>             | <p>Struggles to facilitate communication between people and computer systems, with limited understanding.</p>  |  |
| <b>Basics of Virtualization &amp; Cloud Computing</b> | <p>Clearly differentiates among types of cloud services, with a strong understanding of virtualization and cloud computing concepts, features, and benefits.</p>   | <p>Differentiates among types of cloud services and demonstrates a good grasp of virtualization and cloud computing concepts, features, and benefits.</p> | <p>Provides basic differentiation among types of cloud services but may lack depth in understanding virtualization and cloud computing.</p>    | <p>Attempts to differentiate among types of cloud services but struggles with understanding virtualization and cloud computing concepts.</p>             |  |

This rubric can be used to assess student performance in each of the specified technical competencies and provide clear feedback on their level of proficiency.