KANSAS STATE DEPARTMENT OF EDUCATION

CAREER TECHNICAL EDUCATION (CTE) COURSE COMPETENCIES

AP Networking Course No. 10023 Credit: 1

Student name: _____ Graduation Date: _____

Pathways and CIP Codes: Networking and Telecommunications (11.0901)

Course Description: Technical Level: AP Networking trains students in the field and aligns closely with standard first-year collegiate networking courses. Students develop problem-solving and communication skills by configuring, securing, and troubleshooting networks of increasing scale. Through hands-on activities and real-world scenarios, students are encouraged to understand, design, and manage networks that enable functionalities such as streaming and communication, workplace collaboration, and resilient public infrastructure. Developed in partnership with college faculty and industry leaders, this yearlong course aligns with the NICE Workforce Framework.

Description, benchmarks, and competencies come directly from the AP Networking Framework from the College Board.

Directions: The following competencies are required for full approval of this course. Check the appropriate number to indicate the level of competency reached for learner evaluation.

RATING SCALE:

4. Exemplary Achievement: Student possesses outstanding knowledge, skills or professional attitude.
3. Proficient Achievement: Student demonstrates good knowledge, skills or professional attitude. Requires limited supervision.
2. Limited Achievement: Student demonstrates fragmented knowledge, skills or professional attitude. Requires close supervision.
1. Inadequate Achievement: Student lacks knowledge, skills or professional attitude.
0. No Instruction/Training: Student has not received instruction or training in this area.

BENCHMARK 1: CONNECT AND CONFIGURE

Competencies

#	DESCRIPTION	RATING
1.1	Identify common device and network components, protocols, and configurations, and explain processes and relationships in computer networking.	
1.2	Determine, with and without the support of AI, the appropriate configurations and settings for network devices to enable connectivity, management, and performance.	
1.3	Implement and document device and network configurations to establish and maintain connectivity.	
1.4	Verify connectivity and configurations of devices and networks, and apply the troubleshooting skills to resolve any problems.	

BENCHMARK 2: SECURE

Competencies

#	DESCRIPTION	RATING
2.1	Identify vulnerabilities and their impacts in data, devices, and networks, and explain how security controls, with and without AI integration, can mitigate vulnerabilities and monitor networks.	
2.2	Determine, with and without the support of AI, mitigation strategies to address device and network vulnerabilities.	

#	DESCRIPTION	RATING
2.3	Implement and document security controls to address potential vulnerabilities and monitor networks.	
2.4	Verify that security controls mitigate the intended vulnerability while maintaining access and availability, and apply troubleshooting skills to resolve any problems.	

BENCHMARK 3: TROUBLESHOOT

Competencies

#	DESCRIPTION	RATING
3.1	Identify common device and network problems, and explain how tools, including AI, can be used to diagnose the causes of the problems.	
3.2	Determine, with and without the support of AI, the causes of common device and network problems and determine potential solutions to solve those problems.	
3.3	Implement and document a potential solution to solve a problem.	
3.4	Verify the success of a solution and continue applying troubleshooting skills if needed.	

BENCHMARK 4: COLLABORATE

Competencies

#	DESCRIPTION	RATING
4.1	Develop clear, shared team objectives related to a networking task.	
4.2	Determine clear roles and responsibilities for members of a team working to accomplish a networking task.	
4.3	Implement AI as a collaboration tool individually and as a group.	
4.4	Complete assigned work to accomplish a collaborative networking task.	

I certify that the student has received training in the areas indicated.

Instructor Signature: _____

For more information, contact:

CTE Pathways Help Desk
(785) 296-4908
pathwayshelpdesk@ksde.org

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