IT - Quality Assurance

Sector: IT	Occupation: Quality Assurance Technician	Credential(s):

CareerWise Colorado (CWC) will introduce and support development of these **Career Ready competencies** throughout the apprenticeship (through boot camp, periodic CWC convening's, and training modules delivered by supervisors/coaches over time).

Career Ready Competencies		
Entrepreneurial	**Critical thinking and problem solving**	☐
	Creativity and innovation	☐
	Inquiry	☐
	Risk taking	☐
Personal	**Self-direction**	☐
	Adaptability and flexibility	☐
	Self-management	☐
Civic/Interpersonal	**Collaboration and teamwork**	☐
	Communication	☐
	Global and cultural awareness	☐
	Ethics and integrity	☐
Professional	**Core Academic Foundation**	☐
	Time management	☐
	Grit and resilience	☐
	Work ethic	☐
	Self-advocacy	☐

Technical Competencies

For each competency, use the letter X to indicate whether each competency can be taught and evaluated on the job.

Number	Technical Competencies of the Occupation Pathway
☐ 1	Read documents to gather technical information. ● Perform initial debugging procedures by reviewing configuration files, logs, or code pieces to determine breakdown source.
☐ 2	Monitor computer system performance to ensure proper operation. ● Monitor bug resolution efforts and track successes. ● Monitor program performance to ensure efficient and problem-free operations.
☐ 3	Test computer system operations to ensure proper functioning. ● Conduct software compatibility tests with programs, hardware, operating systems, or network environments. ● Test system modifications to prepare for implementation.
☐ 4	Test software performance. ● Conduct software compatibility tests with programs, hardware, operating systems, or network environments. ● Coordinate user or third-party testing. ● Identify program deviance from standards and suggest modifications to ensure compliance. ● Visit testing sites to evaluate software performance.
☐ 5	Evaluate utility of software or hardware technologies. ● Evaluate or recommend software for testing or bug tracking.
☐ 6	Analyze data to identify trends or relationships among variables. ● Conduct historical analyses of test results. ● Identify, analyze, and document problems with program function, output, online screen, or content. ● Create databases to store electronic data. ● Create or maintain databases of known test defects.

☐ 7	Develop performance metrics or standards related to information technology. ● Develop or specify standards, methods, or procedures to determine product quality or release readiness.
☐ 8	Develop tools for testing and automation purposes. ● Design test plans, scenarios, scripts, or procedures. ● Design and develop test automation frameworks. ● Develop test tools that address areas such as database impact, software, API, etc. ● Develop testing programs that address areas such as database impacts, software ● Update automated test scripts to ensure accuracy.
☐ 9	Develop detailed project plans. ● Plan test schedules or strategies in accordance with project scope or delivery dates
☐ 10	Install computer software. ● Install and configure recreations of software production environments to allow testing of software performance. ● Install, maintain, or use software testing programs
☐ 11	Troubleshoot issues with computer applications or systems. ● Identify, analyze, and document problems with program function, output, online screen, or content- Bug Tracking
☐ 12	Document operational activities. ● Identify, analyze, and document problems with program function, output, online screen, or content. ● Monitor bug resolution efforts and track successes.

☐ **13**	Collaborate with others to determine design specifications or details. ● Participate in product design reviews to provide input on functional requirements, product designs, schedules, or potential problems. ● Provide customer service to clients or users. ● Investigate customer problems referred by technical support.
☐ **14**	Manage documentation to ensure organization or accuracy. ● Review software documentation to ensure technical accuracy, compliance, or completeness, or to mitigate risks.
☐ **15**	Evaluate or recommend software for testing or bug tracking.
☐ **16**	Identify program deviance from standards and suggest modifications to ensure compliance.
☐ **17**	Provide feedback and recommendations to developers on software usability and functionality.