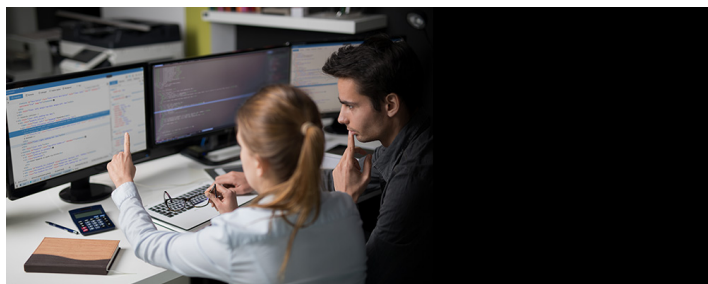# SOFTWARE QUALITY ASSURANCE, POST-DEGREE PROFESSIONAL CERTIFICATE

The Quality Assurance Post-degree certificate prepares anyone with an associates degree for entry level positions in software testing. This certificate helps students gain theoretical knowledge and practical experience with software testing and places emphasis on imparting consistent and good testing practices including manual and automation testing. Students will become very familiar with testing topics that are relevant and of value to industry. Students will be able to create and execute various types of test plans and automation scripts according to the software requirements, execute the test plans with various test data and document/report defects.Students will be able to get recognition for testing as an essential and professional software engineering specialization. Skills acquired will assist students in preparing to take industry certification exams.

This program is available to be completed 100% online.

Program contact: Learn more

This certificate will be automatically awarded when the certificate requirements are completed. If you do not want to receive the certificate, please notify the Office of the Registrar at RegistrarOffice@tri-c.edu.

Learn more about how certificate credits apply to the related degree and about related training programs.

Related Degrees and Certificates

- Mobile Application Development, Short-Term Certificate
- Web Application Development, Short-Term Certificate
- .NET Programming, Post-Degree Professional Certificate
- Information Technology, Programming and Development, Associate Degree
- Information Technology, Programming and Development, Post-Degree Professional Certificate

Related Training and Credentials

- Cleveland Codes Tri-C Software Developers Academy

Applicant must have already completed an associates degree or higher from an accredited college or university.

Program Learning Outcomes

This program is designed to prepare students to demonstrate the following learning outcomes

a. Develop a test plan using the scientific method that meets user acceptance criteria based on existing code and allows plans to be repeatable (i.e. performance, user acceptance, regression).

b. Create an automated test for an API/Web Service and a User Interface (UI) that sets up and tears down the test environment and can automate the execution of features and functions of the software solution to determine if the actual output is the anticipated output and ensure product success.

c. Triage an issue using debugging skills in both physical and virtualized environments to examine a system, look at the four major resources (processor, memory, disk I/O, network) to determine where problem is occurring (Machine connections, software, user, etc) and to provide information to the responsible party (i.e. developer, product owner).

d. Write a well-formed query to extract data, set up data, or analyze data in a test environment. (SQL Server)

e. Perform testing on software including API/Web service, Web, Desktop, and Mobile (Responsive Web Design).

f. Define and apply various test design methodologies to appropriate testing scenarios.

g. Recognize the various tools that are available to use to script for various tasks, including testing, automation, compiling, extracting, and analyzing data for work efficiency.

h. Create documentation of system defects with sufficient detail and advocating for correction to meet customer needs.

i. Use knowledge of basic project management to integrate with the team.

Summer Start		Credit Hours
IT-1025	Information Technology Concepts for Programmers	3
IT-1050	Programming Logic	3
IT-1200	Introduction to Software Quality Assurance	4
	Credit Hours	**10**
First Semester		
IT-2310	Web Programming	3
IT-2650	Java Programming	4
IT-2200	Software Quality Assurance Techniques	4
	Credit Hours	**11**
Second Semester		
IT-2351	Enterprise Database Systems	4
IT-2500	Software Testing Automation	4
IT-2830	Cooperative Field Experience	1-3
	Credit Hours	**9-11**
	Total Credit Hours	**30-32**

MATH-1140, MATH-1141, MATH-1200, MATH-1270, and MATH-1280 can no longer count towards fulfilling the college-level mathematics requirement. These courses were re-classified as developmental mathematics by the state of Ohio in 2016. Tri-C established a 5-year transitioning window for students who had completed these courses prior to 2016 to apply them towards meeting graduation requirements, which expired in Summer 2021. It is highly recommended to see a

counselor to determine the appropriate math required for your current major.