

KAIZENOVA TECHNOLOGIES LLC d/b/a TEK2KAREER

Module Catalog

Module 2 — Automation with Python (96 Hours)

This module is an instructional component of the **Software Quality Assurance & Automation Specialist Certificate (CIP 11.0201)**.

It is **not** a stand-alone licensed program.

A state-licensed certificate is awarded **only after successful completion of both Module 1 and Module 2**.

MODULE OVERVIEW

Module 2 builds on the foundations developed in Module 1 and transitions students into automated testing using Python, Selenium, API scripting, version control, and CI/CD pipelines.

Students will learn:

- Python programming for testing
- Object-oriented scripting
- Automation frameworks (PyTest/Selenium)
- API test automation
- CI/CD workflows with GitHub Actions/Jenkins
- Automation planning, execution, and reporting

This module concludes with an **Automation Framework Capstone Project**, where students build a working automation suite for a sample application—including reusable page objects, automated regression suites, test reports, and GitHub integration.

MODULE OBJECTIVES

At the end of this 96-hour module, students will be able to:

Python for Test Automation

- ✓ Write scripts using Python fundamentals
- ✓ Use OOP to design reusable automation components
- ✓ Work with files, JSON, XML, CSV, and APIs

Automation Framework Development

- ✓ Create automated test scripts using Selenium WebDriver
- ✓ Build and run tests using PyTest
- ✓ Capture logs, screenshots, and test reports

API Automation

- ✓ Understand REST principles
- ✓ Automate API tests using Python requests library
- ✓ Validate JSON responses and status codes

CI/CD & Version Control

- ✓ Use Git and GitHub for managing automation code
- ✓ Configure GitHub Actions or Jenkins to run automated pipelines
- ✓ Interpret build failures and debug automation

Automation Project Execution

- ✓ Structure page objects and test suites
- ✓ Use data-driven and keyword-driven automation
- ✓ Create automated regression runs
- ✓ Integrate automation reports with testing dashboards

DETAILED COURSE OUTLINE (96 HOURS)

Week	Topic	Skills / Tools Covered
1-2	Python Review & OOP Fundamentals	Classes, objects, functions, error handling
3-4	File Handling & Data Parsing	JSON, CSV, API payloads
5-6	Selenium WebDriver Basics	Locators, actions, waits
7-8	Selenium Advanced	Page Object Model, test design
9-10	PyTest Automation Framework	Fixtures, asserts, reporting
11-12	API Automation	Python requests, payload validation
13-14	Version Control (Git/GitHub)	Branching, merging, pull requests
15-16	CI/CD Integration	GitHub Actions or Jenkins
17-18	Debugging & Maintenance	Logs, screenshots, framework optimization

Week	Topic	Skills / Tools Covered
19–24	Automation Framework Capstone	Final project + presentation

MODULE LENGTH & SCHEDULE

- **Total Hours:** 96 hours
- **Length:** 24 weeks
- **Schedule:** 2 days/week × 2 hours/session
- **Format:** Online instruction + hands-on labs + automation project
- **Capstone Presentation:** Required

TUITION & FEES

Item	Cost
Module 2 Tuition	\$5,000
Registration Deposit (required)	\$1,000

Payment Plan Options

Remaining balance divided into monthly installments during the module.

Accepted Payment Methods

Zelle, Venmo, PayPal, Stripe, Square, Credit/Debit.

REFUND POLICY (LEO-Compliant)

Timing	Refund
7+ days before module start	100%
After 1–2 months	50%
After 3–4 months	25%
After 4 months	No refund

Refund requests must be emailed to info@tek2kareer.com and processed within **14 business days**.

ADMISSION REQUIREMENTS

To enroll in this module, a student must:

- Hold a high school diploma, GED, or equivalent
- Demonstrate proficiency in basic computer operations
- Have completed **Module 1 — Software Quality Assurance**, or show proficiency via placement assessment
- Possess English literacy skills
- Provide government-issued ID
- Complete Enrollment Agreement

ATTENDANCE POLICY

- 80% attendance minimum
- More than 20% absences may result in removal
- Tardiness exceeding 15 minutes may be counted as partial absence
- Absences due to documented emergencies may be excused
- Students are responsible for missed work

GRADING POLICY

Component	Weight
Weekly Coding Assignments	35%
Lab Exercises	25%
Automation Framework Capstone	40%

Minimum passing grade: 70%

COMPLETION REQUIREMENTS

To complete this module successfully, students must:

- ✓ Attend at least 80% of classes
- ✓ Submit all Python automation assignments
- ✓ Complete and present the Automation Framework Capstone
- ✓ Participate in labs and reviews
- ✓ Maintain a minimum 70% final grade
- ✓ Fulfill tuition obligations

Completion of this module **alone** does NOT result in a state-licensed certificate.
Both **Module 1 and Module 2** must be completed.

TOOLS & RESOURCES PROVIDED BY SCHOOL

Students will gain access to:

- Tutor LMS platform
- Zoom for live sessions
- Python IDE (PyCharm or VS Code)
- Selenium WebDriver
- GitHub repository access
- GitHub Actions / Jenkins pipeline
- Jira & TestRail for automation assignment integration
- Sample web apps for test automation

Student Equipment Requirements

- Laptop/desktop capable of running automation tools
 - Webcam + microphone for presentations
 - Stable internet connection
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INSTRUCTOR QUALIFICATIONS

Automation instructors meet LEO and industry expectations:

- 5+ years experience in test automation
- Proficiency with Python, Selenium, PyTest, CI/CD
- Hands-on experience building automation frameworks
- Teaching, mentoring, or corporate training background

- Bachelor's degree or equivalent industry experience
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DISCLAIMER

This module is an instructional component of the state-licensed **Software Quality Assurance & Automation Specialist Certificate (CIP 11.0201)**.

It is **not** a licensed standalone program.

Students must complete **both** modules to earn the state-approved certificate.