

ARIZONA WESTERN COLLEGE  
SYLLABUS

TEC 173 GOOGLE IT AUTOMATION WITH PYTHON PROFESSIONAL

Credit Hours: 1 Lec 1 Lab 1

PREREQUISITE: None

COURSE DESCRIPTION

This course is designed to provide the foundations of writing simple programs in Python using the most common structures, an overview of automatic testing, process data and generating automatic reports, setting up developer environments, and tracking different versions of code and configuration files.

1. COURSE GOAL

Develop the ability to write code to solve problems and automate solutions in IT; how to program with Python and how to use Python to automate common system administration tasks; use Git and GitHub, troubleshoot and debug complex problems, and apply automation at scale by using configuration management and the Cloud.

2. OUTCOMES

Upon satisfactory completion of this course, students will be able to:

- 2.1 Develop an understanding of the foundations of writing a program in Python
- 2.2 Demonstrate the ability to use Git and GitHub
- 2.3 Assess problems to perform troubleshooting and debugging techniques
- 2.4 Demonstrate an understanding of configuration management and the cloud
- 2.5 Apply concepts to automating real-world tasks with Python
- 2.6 Apply a variety of strategies to solve different real-world scenarios.
- 2.7 Develop an understanding and use of Puppet
- 2.8 Apply automation to manage fleets of computers

3. METHODS OF INSTRUCTION

- 3.1 Lecture
- 3.2 Multi-media Presentations
- 3.3 Hands on activities

4. LEARNING ACTIVITIES

- 4.1 Hands on activities
- 4.2 Portfolios
- 4.3 Capstone project

5. EVALUATION

- 5.1 Quizzes/Exams
- 5.2 Assignments
- 5.3 Participation
- 5.4 Hands on projects
- 5.5 Portfolios

## 6. STUDENT RESPONSIBILITIES

- 6.1 Under AWC Policy, students are expected to attend every session of class in which they are enrolled.
- 6.2 Classroom Assignments: Students are responsible for work missed and for completing all work before the next class meeting. Students are responsible for participating in all oral drills and for taking all exams.
- 6.3 If a student is unable to attend the course or must drop the course for any reason, it will be the responsibility of the student to withdraw from the course. Students who are not attending as of the 45th day of the course may be withdrawn by the instructor. If the student does not withdraw from the course and fails to complete the requirements of the course, the student will receive a failing grade.
- 6.4 Americans with Disabilities Act Accommodations: Arizona Western College provides academic accommodations to students with disabilities through AccessAbility Resource Services (ARS). ARS provides reasonable and appropriate accommodations to students who have documented disabilities. It is the responsibility of the student to make the ARS Coordinator aware of the need for accommodations in the classroom prior to the beginning of the semester. Students should follow up with their instructors once the semester begins. To make an appointment call the ARS front desk at (928) 344-7674 or ARS Coordinator at (928) 344-7629, in the College Community Center (3C) building, next to Advising.
- 6.5 Academic Integrity: Any student participating in acts of academic dishonesty including, but not limited to, copying the work of other students, using unauthorized “crib notes”, plagiarism, stealing tests, or forging an instructor’s signature—will be subject to the procedures and consequences outlined in AWC’s Student Code of Conduct.
- 6.6 Textbooks and materials: Students are required to bring notebook or looseleaf book, pens, pencils, dictionaries, and purchase textbook required for class.
- 6.7 Arizona Western College students are expected to attend every class session in which they are enrolled. To comply with Federal Financial Aid regulations (34 CFR 668.21), Arizona Western College (AWC) has established an Attendance Verification process for “No Show” reporting during the first 10 days of each semester. Students who have enrolled but have never attended class may be issued a “No Show” (NS) grade by the professor or instructor and receive a final grade of “NS” on their official academic record. An NS grade may result in a student losing their federal financial aid.
- For online classes, *student attendance in an online class is defined as the following* (FSA Handbook, 2012, 5-90):
- Submitting an academic assignment
  - Taking an exam, an interactive tutorial or computer-assisted instruction
  - Attending a study group that is assigned by the school
  - Participating in an online discussion about academic matters
  - Initiating contact with a faculty member to ask a question about the academic subject studied in the course