

# Computer Science II Python Programming

**Local Course #:** 82342

**State Course ID:** 3580300

## **Course Description:**

In this course, students will deepen their understanding of computer science by focusing on Python, one of the most widely used programming languages in the industry. Through hands-on projects, students will design, implement, and present meaningful programs, fostering creativity and innovation. Collaboration with peers and instructors is encouraged to solve complex problems using Python. Students will engage in data analysis, develop search strategies, and apply computer science concepts to access, analyze, and evaluate information. The course emphasizes the importance of selecting appropriate technologies, synthesizing knowledge, creating solutions, and evaluating results. Additionally, students will explore digital citizenship by understanding current laws, regulations, and ethical practices. Upon successful completion, students will have the opportunity to earn a certification in Python programming, enhancing their readiness for careers in software development.

## **Link to TEKS:**

[https://texas-sos.appianportalsgov.com/rules-and-meetings?\\$locale=en\\_US&interface=VIEW\\_TAC\\_SUMMARY&queryAsDate=08%2F06%2F2025&recordId=225616](https://texas-sos.appianportalsgov.com/rules-and-meetings?$locale=en_US&interface=VIEW_TAC_SUMMARY&queryAsDate=08%2F06%2F2025&recordId=225616)

## **First 9 Weeks Major Topics:**

Transitioning from Java to Python

Data structures: tuples, lists, dictionaries

## **Second 9 Weeks Major Topics:**

Object Oriented Python

Python GUIs using tkinter

Regex

Web scraping

JSON

## **Third 9 Weeks Major Topics:**

Data Science With Python

## **Fourth 9 Weeks Major Topics:**

Certification prep

Final Project

