Combs High School

Software & App Design 1 Syllabus

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Room #: 317
Office Hours: 6:30-7:15 am daily

Course Description
This course provides an in-depth introduction to coding in Python. Upon completion, students will master fundamental coding concepts such as statements, variables, expressions, conditionals, and loops. Students will also gain proficiency with advanced topics including software libraries, automation, and sprite-based graphics. In addition, students will learn how to plan and track the progress of large coding projects, debug errors, and improve the readability of their code.

1st Semester Labs:
Numerous small coding labs will be completed in labs.
Percentage of total class time = Approx 51%

2nd Semester Labs:
Evil John Greenbot lab: Students will participate in daily hands-on coding activities related to building a complete chatbot application. The chatbot integrates with IBM's Watson AI engine to respond "emotionally" to user input (i.e. when users are harsh, the chatbot becomes "angry", when users are pleasant, the chatbot becomes "happy"). Percentage of total class time = Approx 51%

Programmers Notebook / Code Review / Life Skills labs: Students document their project code, conduct peer code reviews, prepare resumes, engage in mock interviews, practice communication and listening skills, and perform self-evaluations.
Percentage of total class time = Approx 60%

Grading Scale
90-100% = A
80-89% = B
70-79% = C
60-69%= D
59% or below = F

Semester Grade Calculation
60% Assignments & Labs
10% Quizzes
30% Exams

Late Work
Work is “due” when it is assigned. Sufficient time will generally be provided to complete all work in class, however, students have 7 days to submit their work. Work will generally not be accepted more than 7 days after the date it is assigned.

Exam Retakes
Students will be allowed 1 retake on failed exams (i.e. for exams graded below 60%). Retakes are not permitted on Quizzes.

Classroom Expectations & Policies
On the first day of class, students will sign a statement acknowledging the district, school, & classroom rules, including:

- NO CELL PHONES will be allowed in the classroom. All phones must be turned off and stored in backpacks (or in the phone caddy) in the back of the room. Students observed with a phone during class will have their phone confiscated for the remainder of class and parents/guardians will be notified. For any subsequent offense, the phone will be confiscated and turned in to the office for parent/guardian pickup.
- NO HEADPHONES or EARBUDS will be allowed in the classroom. The same cell phone confiscation policy applies to headphones and earbuds.
- NO GUM will be allowed in the classroom.
- NO FOOD will be allowed in the classroom.
- GAMES OF ANY KIND ARE PROHIBITED, including online games.
- ONLY APPROVED VIDEOS may be viewed during class.
- ONLY WEBSITES relevant to the curriculum may be accessed during class.
- ONLY TWO BATHROOM PASSES will be available upon request from the teacher. Students requiring a pass to another location must request a written hall pass. Students who fail to return promptly will be reported to campus security.
- NO LAPTOPS may be used in this room (Room 317). Students will use assigned workstations during class.a

Curriculum Outline

This course is part of a career and technical education coherent sequence approved by the Arizona Department of Education and the East Valley Institute of Technology. Students will spend no less than 51% of class time engaged in hand-on learning.

SEMESTER 1

Unit 1 (10 Days):
Coding Principles

Unit 2 (10 Days):
Coding Environments

Unit 3 (10 Days):
Python Syntax & Structure

Unit 4 (25 Days):
Linear Programs

Unit 5 (25 Days):
Decisions

Unit 6 (15 Days):
Loops - Part 1

SEMESTER 2

Unit 7 (10 Days):
Loops - Part 2

Unit 8 (25 Days):
Lists

Unit 9 (20 Days):
Data Structures

Unit 10 (20 Days):
User-Defined Functions

Unit 11 (10 Days):
Career Explorations / IT Leadership