Collin College - Continuing Education
COURSE SYLLABUS

COURSE INFORMATION

Course Number: CPGM 6345

Course Title: Beginning Programming 2 with Python

Course Description: Continue to build on Beginning Programming 1 Python concepts.

Suggested Course Prerequisite(s): Beginning Programming 1 with Python, or experience with programming in Python including familiarity with Python's built-in data types (including lists, tuples, and dictionaries), conditional and flow-of-control structures (including if / elif / else, for, and while), and input / output functions.

Course Resources: (Optional, not required)
Murach's Python Programming by Michael Urban and Joel Murach, 978-1890774974

Python Crash Course, 2nd Edition: A Hands-On, Project-based Introduction to Programming by Eric Matthes, 978-1593279288

Student Learning Outcomes: Demonstrate Python programming concepts with OOP, strings, exceptions, modules and packages, file handling.

Certification Notes: This course provides preparation for industry-recognized certification exam PCAP - Python Certified Associate -Level Programmer. (Exam fee not included in course.)

Course Sessions: Listed are guidelines to indicate all topics that will be covered during yourcourse. Do not plan your personal calendar based on these sessions. Your instructor will giveyou a calendar for your class that will indicate specific topics, assignments, and days.

Lesson Plan – by week or session:
Session 1 The fundamentals of OOP (Object Oriented Programming), class, object, property, method
Session 2: inheritance, superclass, subclass, abstraction, encapsulation, and polymorphism
Session 3: instance vs class variables, __dict__ property (objects vs classes), private components (instance vs classes), name mangling.
Session 4: isinstance(), overriding, not is and is operators, hasattr() (objects vs classes),
Session 5: __name__, __module__, __bases__ properties, __str__() method
Session 6: list comprehension, lambdas, map(), filter(),closures.
Session 7: I/O Operations: I/O modes, predefined streams, handles; text/binary modes
open(), errno and its values.
Session 8: ASCII, UNICODE, UTF-8, codepoints, string indexing, slicing, immutability, iterating through, concatenating, multiplying, comparing.
Session 9: strings and their specific methods.
Session 10: concept of an exception and Python's implementation of exceptions.
Session 11: Python modules: their rationale, function, how to import them in different ways
Session 12: testing students learning outcome

Method of Evaluation: Unless otherwise stated, course completion is evaluated on the basisof attendance. Students must be in attendance 90% of each course in a certificate series for successful completion and to earn a certificate as specified.

Refund Policy: Please refer to www.collin.edu/ce/inforegistrar.html for our refund policy. Norefunds after the start time of the first class.

Americans with Disabilities Act: Collin College will adhere to all applicable federal, state, and local laws, regulations, and guidelines with respect to providing reasonable accommodations as required to afford equal opportunity. It is the student's responsibilityto contact the ACCESS office, SCC-D140 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current *Collin Student Handbook* for additional information.