DSC430: Python Programming

Session: Fall 2019   **Instructor:** Christopher Kang

Lecture: 5:45-9:00, 9/11 – 11/26   Email: ckang11@depaul.edu

Class: LEWIS 01110   Cell Phone: (310) 560-3979

Office: LEWIS 01110   Office Hours: Wednesday, 9:00-10:30PM

<u>**Please email ahead of time**</u>

Course Description: This course builds the skills necessary to use Python to develop larger programs and libraries. Students will learn to design, implement and debug Python functions and programs, including stochastic and object-oriented techniques. The course will cover Python data structures, and Python facilities for working with files, strings, regular expressions, databases and URLs. The course will also include an introduction to the Pandas package for data management, the NumPy package for scientific computing, and the Matplotlib package for visualization.

Prerequisites: CSC 401: Introduction to Programming

Course Management System: DePaul University's Desire2Learn system (d2l.depaul.edu).

Recommended books: None.

News Widget: The primary form of communication for this class will be the news widget on the D2L. Please make sure you subscribe to the widget and that DePaul has you correct email.

Software: The class will focus on Python using Jupyter Notebooks and Visual Studio.

Assignments: The course will include five assignments, each worth 20% of the final grade.

Late Submissions: Late submissions incur a 1% penalty per hour.

Final Grades: A: 90% - 100%

                        B: 80% - 90%

                        C: 70% - 80%

                        D: 60% - 70%

                        F: less than 60

*Plusses and minuses are given to the upper and lower 3 %

Drop Dates: Refer to https://academics.depaul.edu/calendar/Pages/default.aspx

Course Schedule: Find below an outline of the topics that will be covered in the class. As this is the first time the class is offered, there is likely to be small changes in the scheduling. Any changes will be discussed in class.

- Week 1. Review. Basic Python.
- Week 2. Functions. Objects.
- Week 3. Text Data. File IO. Databases. URLs.
- Week 4. Control Structures.
- Week 5. Data Structures.
- Week 6. SciKit Learn.
- Week 7. Pandas.
- Week 8. Numpy.
- Week 9. Matplotlib.
- Week 10. Catchup. Advanced Topics.

Attendance: Attendance is not required. However, it is expected that you will attend every class; it is the single most important action you can take in mastering the course objectives. You are responsible for all material covered, assignments delivered or received, and announcements made in class sessions that you miss. For distance learning students, this means viewing the classes in a timely manner, participate in the discussion forum, and being sure to email or call in any questions that you have.

Online Teaching Evaluation: Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in CampusConnect.

Academic Integrity Policy: This course will be subject to the academic integrity policy passed by faculty. More information can be found at http://academicintegrity.depaul.edu/

Plagiarism: The university and school policy on plagiarism can be summarized as follows: Students in this course should be aware of the strong sanctions that can be imposed against someone guilty of plagiarism. If proven, a charge of plagiarism could result in an automatic F in the course and possible expulsion. The strongest of sanctions will be imposed on anyone who

submits as his/her own work any assignment which has been prepared by someone else. If you have any questions or doubts about what plagiarism entails or how to properly acknowledge source materials be sure to consult the instructor.

Incomplete: An incomplete grade is given only for an exceptional reason such as a death in the family, a serious illness, etc. Any such reason must be documented. Any incomplete request must be made at least two weeks before the final, and approved by the Dean of the College of Computing and Digital Media. Any consequences resulting from a poor grade for the course will not be considered as valid reasons for such a request.

Resources for Students with Disabilities: Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.

To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

Student Center, LPC, Suite #370

Phone number: (773)325.1677

Fax: (773)325.3720

TTY: (773)325.7296