Collin College - Continuing Education
COURSE SYLLABUS

COURSE INFORMATION

Course Number: ITSE 1042 - Intermediate Programming Languages

Course Title: Data Science - Programming

Course Description: Explore data pull with SQL, manipulation with Python and R programming languages and creation of data visualizations.

Suggested Course Prerequisite(s): Basic ability to use a code editor, exposure to programming in any language – beyond the beginner level. Instructor approval.

Course Resources: Student must bring personal laptop computer for use in class. Installation of Anaconda Distribution for Python/R and SQLite3 will be covered in Session 1.

Student Learning Outcomes: Demonstrate the ability to pull data with SQL and manipulate data with Python and R programming languages and generate visualizations.

Certification Notes: Part of the Data Science certificate series

Lesson Plan:

Session 1: Installing Anaconda and Jupyter Notebooks
Session 2: Introduction to Python, Numpy
Session 3: Introduction to Pandas
Session 4: Visualization with matplotlib
Session 5: Introduction to SQL with SQLite3
Session 6: More SQL with SQLite3, DB Browser
Session 7: Introduction to R
Session 8: Working with Data Frames and Data Sources
Session 9: Data Visualization with R. Putting it all together.

Choosing an open and free dataset and working on it as we progress through the session. Time permitting present the Notebook in Session-9. More in Session-1

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

Method of Evaluation: Unless otherwise stated, course completion is evaluated on the basis of 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. No refunds 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 responsibility to contact the ACCESS office, SCC-G200 or 972.881.5898 (V/TTD: 972.881.5950) to arrange for appropriate accommodations. See the current Collin Student Handbook for additional information. http://www.collin.edu/studentresources/personal/studenthandbook.aspx