#### **DSC**

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## DSC 216 Python Programming II 3.0 UNITS

This course is intended for students who have completed the Python Programming course (CSC 118) or have the prerequisite knowledge of the course topics discussed in that class. By the end of this course, students should have a solid understanding of program classes, objects, inheritance, exceptions, file handling, database modules, graphical modules, and numerical analysis modules. Students will explore core libraries that allow programs to access operating system services, manipulate data of many types, interact with the user through graphical user interfaces (GUIs), and crunch out data metrics. Labs will be used to reinforce concepts introduced during lectures.

# DSC 217 Fundamentals of Data Science 3.0 UNITS

This course will introduce the students to a data science cycle, including manipulating, processing, cleaning, and visualizing data in Python language + Jupyter Notebook environment, for making reasonable decisions and communicating results. Lab hours reinforce concepts introduced and during lecture.

### DSC 218 Data Visualization 3.0 UNITS

This course introduces students to the principles and techniques of data visualization. Students learn how to use Power BI to Drive Dashboard, value of visualization, design principles of visualization, visualization with Data Tables, using shapes to create Infographics, visualizing performance comparison, visualizing parts of a whole, and visualizing changes over time. R and/ or Python programming language will be used to teach students how to manage datasets and use plotting systems. Labs will be used to reinforce concepts introduced during lectures.