Introduction to Python
BANA 5196/8090
Fall 2017

Instructor: Andrew Armstrong
Personal Email: andrewarmstrong004@gmail.com
Class Days: 6/17, 6/24, 7/8

Classroom: Bldg Lindner, Rm 108
Personal Cell: (210) 695-0597
Class Time: 0900 – 1800

Class Information and Resources:
1. https://canopy.uc.edu
2. https://github.com/andrewarmstrong004/bana_8090
3. https://bana8090.slack.com

Course Description: This course is designed to be an introduction to Python with case studies and homework focused on applications in data analytics. The material will emphasize the core concepts in Python, specifically data types, data structures, functions, and classes and how they can be implemented and used to address a particular problem. Popular modules used in data analysis will also be covered at a high level to include both NumPy and Matplotlib.

References: This is a list of books that were referenced during the construction of the course, or that I believe will help to further expand you Python knowledge. If want more information on Python or how it can be used in data analytics, these books will provide a good staring point. **None of these books are required for this course.**

- Python Basics

- Python Analytics

- More Advanced Python

- Transitioning from Python 2.7x to Python 3.x

- Theory
Objectives:

- Describe the differences between the main branches of Python
- Know and be able to utilize the basic Python data types and structures
- Write basic Python statements such as if/elif/else, for loops, and while loops
- Be able to import and use standard Python modules for importing, exporting, and manipulating data
- Write a basic Python module and be able to describe how modules work
- Write a Python class which takes advantage of inheritance
- Handle basic errors in Python programs
- Incorporate commonly used modules such as NumPy and Matplotlib into a program to improve its utility

Tentative Course Outline:

<table>
<thead>
<tr>
<th>Day 01 - June 17</th>
<th>Day 02 - June 24</th>
<th>Day 03 - July 08</th>
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<tbody>
<tr>
<td>Basic overview of Python</td>
<td>Advanced functions</td>
<td>Python classes and inheritance</td>
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<td>Python data types</td>
<td>Using basic modules</td>
<td>Matplotlib</td>
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<td>Python data structures</td>
<td>Importing and Exporting Data</td>
<td>NumPy</td>
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<td>Statements in Python</td>
<td>Pandas</td>
<td>Introduction to APIs</td>
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<tr>
<td>Basic introduction to functions</td>
<td>Exception handling</td>
<td>More advance modules</td>
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Grading Policy:

- **Homework (60%)** -
  
  Each section covered in class will have a short homework assignment associated with it. You will have time to work on these assignments in class, but if you don’t finish them, you will have to complete them outside of class.

- **Project (40%)** -
  
  The class project will require students to create a basic module for a real world data analysis problem. This module will require the use and understanding of nearly every concept covered in class. This includes data types, data structures, functions, classes, error handling, and the utilization of common Python modules.
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**Academic Integrity:** As with all Lindner College of Business efforts, in this course you will be held to the highest ethical standards, critical to building character. Ensuring your integrity is vital and ultimately is your responsibility. To help ensure the alignments of incentives, the Lindner College of Business has implemented a “Two Strikes Policy” regarding Academic Integrity that supplements the UC Student Code of Conduct (see: [http://www.uc.edu/conduct/Code_of_Conduct.html](http://www.uc.edu/conduct/Code_of_Conduct.html))

- All academic programs at the Lindner College of Business use this “Two Strikes Policy”: Any student who has been found responsible for two cases of academic misconduct may be dismissed from the College.

- All cases of academic misconduct (e.g., copying other students assignments, failure to adequately cite or reference, cheating, plagiarism, falsification, etc.) will be formally reported by faculty; and

- Students will be afforded due process for allegations as outlined in the policy.

**Special Needs Policy** If you have any special needs related to your participation in this course, including identified visual impairment, hearing impairment, physical impairment, communication disorder, and/or specific learning disability that may influence your performance in this course, you should meet with the instructor to arrange for reasonable provisions to ensure an equitable opportunity to meet all the requirements of this course. At the discretion of the instructor, some accommodations may require prior approval by Disability Services.