DATA 801 **Programming for Data Science** **Summer 2016**

Instructor:	Jeremiah W. Johnson, Ph.D
Office Hours:	Via Skype, hours to be determined.
Phone:	(603) 641-4127
Email:	jeremiah.johnson@unh.edu (This is the best way to reach me)
Instruction Hours:	W 9:00AM - 12:00PM
Recommended textbooks:	*Learning Python*, 5^{th} ed., 2013, by Lutz.* *Python for Data Analysis*, 2012, by McKinney.*
Course Description:	Introduction to programming for data science using Python.

Tentative Schedule:

May 25	Introduction to Python. Foundations including interacting with Python, basic control structures, functions, data input and output.
June 1	Numerical Python. Introduction to Scipy, Numpy, Pandas. Basic exploratory analysis and data munging.
June 8	Data munging, exploratory analysis and visualization. Introduction to Matplotlib and Bokeh.
June 15	Data collection using Python. Web scraping and APIs. Data management.
June 22	Interacting with other tools (such as databases, containers). More data management. PEP8 and Pythonic coding.

Homework: There will be three graded programming assignments, due dates and weights as follows:

1. **Homework 1** Due Wednesday June 1, 10 points
2. **Homework 2** Due Wednesday June 8, 10 points
3. **Homework 3** Due Wednesday June 22, 20 points

Software: Required: The Anaconda Python distribution, using Python 3. https://www.continuum.io/downloads. **Recommended**: Sublime Text 3. https://www.sublimetext.com/.

Alterations to Syllabus: Consider this syllabus a general guide. If changes to the syllabus or schedule need to be made as they course progresses, they will be announced in class.

$*$: An electronic copy of this book is available free of charge through the UNH Library.