Course Syllabus Part I
DSC 500 – Introduction to Data Science
3 Credit Hours

Course Description
This course introduces the possibilities, history, and ethics surrounding Data Science. Basics of data science are explored, including vocabulary, programming languages, big data frameworks, visualization, and statistics. Prior programming experience is not needed for this course.

Course Prerequisites: None

Course Objectives
Students who successful complete this course should be able to:

1. Describe what Data Science is and the skill sets needed to be a data scientist.
2. Demonstrate an understanding of the Data Science Process and how its components interact.
3. Apply the Data Science Process to Case Studies using exploratory data analysis.
4. Compare data science approaches and their ethical pitfalls.
5. Explore data using EDA or exploratory data analysis.
6. Explain what the various programming languages used in data science are there to do.
7. Begin to develop your own portfolio and outside data science projects.

Grading Scale

93 – 100% = A	87 – 89% = B+	77 – 79% = C+	67 – 69% = D+
90 – 92% = A-	83 – 86% = B	73 – 76% = C	63 – 66% = D
	80 – 82% = B-	70 – 72% = C-	60 – 62% = D-
			0 – 59% = F

Topic Outline

1. History
    a. When Computers Were Human
    b. When Computer Science was Datology
    c. From Business Only Use to Substance
    d.

2. The Data Science Process
    a. How to ask interesting questions.
    b. How to get data.
    c. How to explore data.
    d. How to model data.
    e. Communicating and visualizing datascience.

3. What do Data Science Projects Look Like?
    a. Algorithms.
    b. A Spam Filter – Bayesian v. Frequentist.
    c. Data science in the business world.
    d. Recommendation engines.
    e. Social networks.
    f. In the health industries.

4. From Business Only Use to Substance
    a. Why do people use computers?
    b. What don't people know about the machines they use?
    c. How do companies take advantage of that?
    d. Does it matter?

5. Accessibility Issues

6. What You'll Need to Learn to Use
    a. Software
    b. Social Stuff
    c. Online communities
    d. Online identity

7. Tools and Things to Develop in This Program
    a. Github
    b. Kaggle
    c. Quora
    d. Jupyter
    e. Other things of interest