

STAT 4185-XXX. Special Topics in Data Science
Spring 2018

Instructor: DR. ABIDEMI K. ADENIJI
Adjunct Professor, Department of Statistics

Class Hours: Friday 5:30-8:30pm; **Class Room:** AUST 340

Teaching Assistant: xxx , Email: xxx

Textbook:

Practical Data Science with R, First Edition, Nina Zumel and John Mount, Manning, 2014

References:

Modern Data Science with R, First Edition, Benjamin S. Baumer, Daniel T. Kaplan and Nicholas J. Horton, Chapman and Hall/CRC, 2017.

Course Description:

The purpose of this course is to gain understanding on the basic and critical importance of data science with applications to clinical drug development. Students will gain insights on the pivotal contribution of data science in the cross-functional decision-making drug development team. Topics to be covered are: importing data into R, data wrangling, statistical learning and predictive analytics with applications to clinical trials and postmarketing studies.

Prerequisite:

Successful completion of an introductory course in statistics at the level of STAT 1100Q (Elementary Concepts of Statistics) is a prerequisite for this course.

Chapters:

We will mainly cover Chapters 1 through 7 of the textbook. Students will be expected to master the basic material and to demonstrate a deeper understanding in those chapters. We will also cover some sections of Chapter 11 (Producing effective presentations). If time permits, some sections of Chapter 8 will be covered.

Course Material:

- Course syllabus, lecture notes, homework assignments, and some other related course materials will be posted on the HuskyCT course website: <https://lms.uconn.edu/>.
- The lecture notes will be available before each class. The students are responsible to download or print out all required course materials.

Assignments:

Competencies will be assessed in a manner to distinguish levels of performance in the pharmaceutical industry work environment. Final grades will be determined from the contributions of the individual and the group.

Individual contribution:

- Homework assignments should be comprehensively completed by each student, however discussions and problem solving are encouraged between students. The assignment will be posted on the HuskyCT course website.
- There will be pop quizzes that will directly evaluate homework comprehension.
 - The lowest quiz score will be dropped in the calculation of final grades.

Group contribution:

- There will be an End of Term group project report and a class presentation.
 - Every student will have the opportunity to present their work to the class.

Exams:

- The course exam is in-class and open book. Class notes are allowed.
- Only in case of medical emergencies with appropriate documents, a make-up can be arranged. Normally no make-ups are given.

Important Dates:

- The course exam is scheduled for: **6:30pm-8:30pm, Friday, March 23, 2018.**
(There will be class from 5:30pm-6:30pm).
- Final group presentations and report date: **9:30am-2:00pm, Saturday, April 28, 2018**

Grading:

The grades will be assigned as follows:

Homework	25%
Pop Quizzes	5%
Exam	30%
Course Project	35%
Participaton and Dedication	5%

As shown above, the **Course Project** is worth 35% of the final grade, please see below, its milestones.

Project proposal	5%
Progress report	10%
Final report	10%
Presentation	10%