RUTGERS
Rutgers Business School
Newark and New Brunswick

Information Technology
Course Number: 22:544:660
Course Title: Business Analytics Programming

COURSE DESCRIPTION

This course is meant to teach you how to use data, statistical analysis and quantitative methods to help businesses make better decisions and gain insights into business operations using the python programming language. You will be learning the pandas package, which is used for data storage and manipulation, and the numpy package which is the math/statistical libraries in python. In addition, we will be using unstructured data from social media to apply data transformation techniques and the statistical procedures

COURSE MATERIALS

- Slides will be on Canvas
- Codes and Practice Questions will be on Canvas

LEARNING GOALS AND OBJECTIVES

The goal of this class should be to gain an understanding to how to do data and statistical analysis in python and how to use API's to do source and structure unstructured data.

ACADEMIC INTEGRITY

I do NOT *tolerate cheating*. Students are responsible for understanding the RU Academic Integrity Policy http://academicintegrity.rutgers.edu/

I will strongly enforce this Policy and pursue *all* violations. On all examinations and assignments, students must sign the RU Honor Pledge, which states, "On my honor, I have neither received nor given any unauthorized assistance on this examination or assignment." I will screen all written assignments through *SafeAssign* or *Turnitin*, plagiarism detection services that compare the work against a large database of past work. Don't let cheating destroy your hard-earned opportunity to learn. See business.rutgers.edu/ai for more details.

ATTENDANCE AND PREPARATION POLICY

- Attendance is not required but is strongly recommended.

CLASSROOM CONDUCT

Please respect your fellow classmates by not disrupting the lectures or talking while they are trying to ask questions.

EXAM DATES AND POLICIES

There are 3 exams in this course:

Midterm 1 Exam: (), bring a calculator, 1 cheat sheet both sides
Midterm 2 Exam: (), bring a calculator, 1 cheat sheet both sides
Final Exam: (), it is **cumulative**, bring a calculator, 1 cheat sheet both sides

During exams, the following rules apply:
  - If you have a disability that influences testing procedures, provide me an official letter from the Office of Disability Services at the start of the semester.
  - Cell phones must be turned off and placed screen-side in the front of your table. Once you receive the exam you cannot touch your cell phone UNTIL after you submit your exam.
  - You must show a valid Rutgers photo ID to enter the room and to turn in the exam.
  - Assigned seating; I will randomly seat you for the exam.
  - Use the bathroom prior to the exam start; bathroom breaks can only happen if there is an additional proctor to escort you to the exam.

GRADING POLICY

*Labs are meant for you to practice the lessons from the class, and allow me to give individual attention to students with their programming

Midterm 1 – 130 pts
Midterm 2 – 130 pts
Final – 240 pts

Grade scale (pts):
A >=400
399 >= A- > 375
374 >= B+ >350
349 >= B > 325
324 >= B- > 300
299 >= C+ > 275
274 >= C > 250
249 >= C- > 225
224 >= D >= 200
F < 224

- Grade posting: My graders do their best to return grades the following class.
 - Grade grubbing: Consider a note along these lines: "Your final grade is not subject to negotiation. If you feel I have made an error, submit your written argument to me within one week of receiving your final grade. Clarify the precise error I made and provide all due supporting documentation. If I have made an error, I will gladly correct it. But I will adjust grades only if I have made an error. I cannot and will not adjust grades based on consequences, such as hurt pride, lost scholarships, lost tuition reimbursement, lost job opportunities, or dismissals. Do not ask me to do so. It is dishonest to attempt to influence faculty in an effort to obtain a grade that you did not earn, and it will not work.

COURSE SCHEDULE

This Syllabus WILL change throughout the semester!!

Topic
Class Intro, Numpy, Pandas, Assessment
Lab 1: NY State 2016 fundraising data – Series, Pandas DataFrame
Practice Set #1 Practice Set # 2
Lab 1b: NY State 2016 fundraising data – Pandas Aggregation
Practice Set # 3 Lab 2: Twitter API
Midterm # 1
Practice Set # 4
Lab 3: For Loop to Extrapolate historical tweets
Spring Break!!!!
Lab 4: Natural Language Processing using TextBlob
Lab 5: Cherry Blossom Race Simple Web Scraping
Midterm # 2
Practice Set # 5 Lab 6: Normalizing Scraped Data
Lab 6: Normalizing Scraped Data
Lab 6: Normalizing Scraped Data
Final

SUPPORT SERVICES

If you need accommodation for a ***disability***, obtain a Letter of Accommodation from the Office of Disability Services. The Office of Disability Services at Rutgers, The State University of New Jersey, provides student-centered and student-inclusive programming in compliance with the Americans with Disabilities Act of 1990, the Americans with Disabilities Act Amendments of 2008, Section 504 of the

Rehabilitation Act of 1973, Section 508 of the Rehabilitation Act of 1998, and the New Jersey Law Against Discrimination. More information can be found at ods.rutgers.edu.

[Rutgers University-New Brunswick ODS phone (848)445-6800 or email dsoffice@echo.rutgers.edu]

[Rutgers University-Newark ODS phone (973)353-5375 or email ods@newark.rutgers.edu]

If you are *pregnant*, the Office of Title IX and ADA Compliance is available to assist with any concerns or potential accommodations related to pregnancy.

[Rutgers University-New Brunswick Title IX Coordinator phone (848)932-8200 or email jackie.moran@rutgers.edu]

[Rutgers University-Newark Office of Title IX and ADA Compliance phone (973)353-1906 or email TitleIX@newark.rutgers.edu]

If you seek *religious accommodations*, the Office of the Dean of Students is available to verify absences for religious observance, as needed.

[Rutgers University-New Brunswick Dean of Students phone (848)932-2300 or email deanofstudents@echo.rutgers.edu]

[Rutgers University-Newark Dean of Students phone (973)353-5063 or email DeanofStudents@newark.rutgers.edu]

If you have experienced any form of *gender or sex-based discrimination or harassment*, including sexual assault, sexual harassment, relationship violence, or stalking, the Office for Violence Prevention and Victim Assistance provides help and support. More information can be found at http://vpva.rutgers.edu/.

[Rutgers University-New Brunswick incident report link: http://studentconduct.rutgers.edu/concern/. You may contact the Office for Violence Prevention and Victim Assistance at (848)932-1181]

[Rutgers University-Newark incident report link: https://cm.maxient.com/reportingform.php?RutgersUniv&layout_id=7 . You may also contact the Office of Title IX and ADA Compliance at (973)353-1906 or email at TitleIX@newark.rutgers.edu. If you wish to speak with a staff member who is confidential and does **not** have a reporting responsibility, you may contact the Office for Violence Prevention and Victim Assistance at (973)353-1918 or email run.vpva@rutgers.edu]

If students who have experienced a temporary condition or injury that is adversely affecting their ability to fully participate, you should submit a request via https://temporaryconditions.rutgers.edu .

If you are a military *veteran* or are on active military duty, you can obtain support through the Office of Veteran and Military Programs and Services. http://veterans.rutgers.edu/

If you are in need of *mental health* services, please use our readily available services.

[Rutgers University-Newark Counseling Center: http://counseling.newark.rutgers.edu/]

[Rutgers Counseling and Psychological Services–New Brunswick: http://rhscaps.rutgers.edu/]

If you are in need of *physical health* services, please use our readily available services.

[Rutgers Health Services – Newark: http://health.newark.rutgers.edu/]

[Rutgers Health Services – New Brunswick: http://health.rutgers.edu/]

If you are in need of *legal* services, please use our readily available services: http://rusls.rutgers.edu/

Students experiencing difficulty in courses due to *English as a second language (ESL)* should contact the Program in American Language Studies for supports.

[Rutgers–Newark: PALS@newark.rutgers.edu]

[Rutgers–New Brunswick: eslpals@english.rutgers.edu]

If you are in need of additional *academic assistance*, please use our readily available services.

[Rutgers University-Newark Learning Center: http://www.ncas.rutgers.edu/rlc

[Rutgers University-Newark Writing Center: http://www.ncas.rutgers.edu/writingcenter]

[Rutgers University-New Brunswick Learning Center: https://rlc.rutgers.edu/]

[Optional items that many faculty include:

  - Students must sign, date, and return a statement declaring that they understand the RU Academic Integrity Policy.

  - Students must sign, date, and return a statement declaring that they understand this syllabus.]