DataStory Studio Honors XXXX

**Instructor:**

Dr. Daniel Maxwell

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(352) 294-1034

**Office Hours:**

TBD

Course Description

In this class, students will acquire basic data science skills to tell a compelling data story. To that end, you will first develop a working knowledge of descriptive statistics. Second, you will acquire the ability to express that understanding in simple R programs. And finally, you will put these newly acquired skills to use in the production of a DataStory using RMarkdown.

A key feature of this course is its focus on active learning. You will learn by doing, with hands-on assignments and programming projects. Although this class has no pre-requisites, students should have a) a question they. An interest in and/or exposure to computer programming is also helpful, though the key determinant of success in this class is a desire to learn through fearless experimentation.

Required Texts

Salkind, N. J., & Shaw, L. A. (2019) *Statistics for people who (think they) hate statistics using R. Thousand*

*Oaks,* CA: Sage Publications. ISBN 978-1544324579

Required Software

You will be required to use the free Rstudio integrated development environment (IDE). Instructions on how to install this software package are provided in Module 1: R and RStudio.

Office Hours, Tutoring, and Academic Support

I have scheduled office hours each week, but I am available at other times as well. If you would like to meet with me, just send an email with times you are available and we can set up a time to meet.

We will also have student tutors hold regular office hours each week. These hours will be posted on Canvas as soon as they are available.

Student Learning Objectives

The Student Learning Objectives (SLOs) for this course are:

1. Students will be able to navigate within the RStudio (IDE)
2. Students will be able to manage datasets using R.
3. Students will be able to create basic graphs in R.
4. Students will be able to compute and interpret basic descriptive statistics (e.g., mean, median, mode, standard deviation, z scores).
5. Students will be able to determine which statistic is appropriate in different situations.
6. Students will be able to create and interpret graphs.
7. Students will be able to generate and interpret R output for all of the statistics described above.
8. Students will appreciate the value of data science and statistics.

Course Communication

All course-related communication and questions should be posted to the Canvas learning environment. Private questions should be sent to the instructor via Canvas -- the course management system.

Course Structure

The course has been designed to minimize lectures and to maximize your active learning of the material. Although I provide brief video lectures in Canvas, the vast majority of your time will be spent working on activities that were designed to help you develop an understanding of the material.

Coding Assignments

For these assignments, you will first need to create a script file. In the script file, add comments to identify the code for each question. Here’s a template of how this should be done. Please note: the pound sign (#) identifies user-supplied comments in the code.

# Your Name

# Date

# Coding Assignment Number

# Question 1

Your code goes here

For each line or block of code executed, include console output here

# Question 2

Your code goes here

For each line or block of code executed, include console output here

# Etc…

Once you’ve tested your code by executing each line in the console, save the file and then convert it to a .pdf file for upload to Canvas. A quick way to do that is to copy-and-paste everything in the script console into a MS Word document and then save the Word document as a .pdf file, using the File -> Save As option.

If you’re adventurous, explore the possibility of creating an RMarkdown document and then “knitting” it to a .pdf. Be sure to use the template provided above to construct your document. Also, you’ll need to install either MikTex or MacTex on your computer in order to create a .pdf document using RStudio’s “knit” function.

At the end of the course, the R coding assignments will be worth 80 points, 20 points per assignment.

Data Story Presentation

The data story presentation is an important assignment that accounts for almost a quarter of your final grade, or 100 points. To accomplish this assignment, you must create a short video of 4 to 6 minutes where you present a data story. It is important that you carefully review the mini-project presentation rubric as your final grade on this assignment will be based on the criteria listed in that document. The analysis presented in this video must be yours alone and not a derivative. In other words, do not create a mashup of videos from the internet and submit that as your presentation.

Be sure to reference and properly use the descriptive statistical concepts you learned from the assigned readings. You do not need to use every concept, just those that are pertinent to your story’s narrative. Above all else, keep it simple. Keep it clear.

In order to succeed on this assignment, you’ll need to find an interesting dataset to explore. You might even decide to join two datasets. The choice of data and the method of analysis is completely up to you. However, I encourage you to identify an interesting dataset as soon as possible. Do not wait to do this until the day before the assignment is due! It is vital that you begin work on this assignment right away because you must submit all of your exploratory data analysis code at the time you submit your data story video. I want to see the code you wrote to explore your dataset(s) and create the graphics in your video presentation. Doing quality data analysis requires time – periods of exploration interspersed with moments of reflection – so you’ll want to budget adequate time for this assignment.

Student Evaluation and Assessment

Your grade for this course will be based on activities and chapter quizzes (100 points as a set), reading question assignments (100 points as a set), R coding assignments (80 points), discussion forum participation (70 points), and final data story video (150) points.

Your final grade will be the percent of points you receive out of the 1000 points that are possible. The following grade cuts will be used:

93 to 100% = A 87 to 89.9% = B+ 77 to 79.9% = C+ 67 to 69.9% = D+

90 to 92.9% = A- 83 to 86.9% = B 73 to 76.9% = C 63 to 66.9% = D

80 to 82.9% = B- 70 to 72.9% = C- 60 to 62.9% = D-

Below 60% = F

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| --- | --- | --- |
| Deliverable | Points | % Value |
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Academic Honesty and “Working Together” on Homework

The policy for *exams* is INDIVIDUAL WORK. Group work during exams will not be permitted. The time for learning from each other is during the activities, additional problems, and practice tests. However, it is important to note that it is inappropriate to copy any portion of another student’s work even if that student took the course during a previous semester. “Working together” is not equivalent to “copying.” Working together means that each person is actively engaged in trying to understand the material not just “getting the right answer to turn in.” If you have any questions about what constitutes appropriate “working together” you should ask me. Of course, I expect you to uphold the honor code of the University in its entirety: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” Using another’s completed course work is unauthorized aid. I expect you to do more than simply follow rules. I expect you to act honorably in all of your exchanges with me, and I will act honorably when I interact with you.

Makeup Policy

Requirements for class attendance and make-up exams, assignments, and other work in this course are consistent with university policies that can be found at:

<https://catalog.ufl.edu/ugrad/current/regulations/info/attendance.aspx>.

Course Schedule & Assignment Due Dates

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| Date | Assignment |  |
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Online Course Evaluations

“Students are expected to provide feedback on the quality of instruction in this course by completing online evaluations at https://evaluations.ufl.edu. Evaluations are typically open during the last two or three weeks of the semester, but students will be given specific times when they are open. Summary results of these assessments are available to students at <https://evaluations.ufl.edu/results/>.

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# Students Requiring Accommodations

Students with disabilities requesting accommodations should first register with the Disability Resource Center (352-392-8565, www.dso.ufl.edu/drc/) by providing appropriate documentation. Once registered, students will receive an accommodation letter, which must be presented to the instructor when requesting accommodation. Students with disabilities should follow this procedure as early as possible.

# Campus Resources

Resources are available on campus for students having personal problems or lacking clear career and academic goals, which interfere with their academic performance. These resources include:

Students with Disabilities

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## Health and Wellness

* U Matter, We Care: If you or a friend is in distress, please contact umatter@ufl.edu or 352 392-1575 so that a team member can reach out to the student.
* Counseling and Wellness Center: http://www.counseling.ufl.edu/cwc/Default.aspx, 392-1575;
* Sexual Assault Recovery Services (SARS) at the Student Health Care Center, 392-1161.
* For emergencies call: University Police Department, 392-1111 (or 9-1-1 for emergencies). http://www.police.ufl.edu/

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## Academic Resources

* E-learning technical support, 352-392-4357 (select option 2) or e-mail to Learning-support@ufl.edu. https://lss.at.ufl.edu/help.shtml.
* Career Resource Center, Reitz Union, 392-1601. Career assistance and counseling. http://www.crc.ufl.edu/
* Library Support, http://cms.uflib.ufl.edu/ask. Various ways to receive assistance with respect to using the libraries or finding resources.
* Teaching Center, Broward Hall, 392-2010 or 392-6420. General study skills and tutoring. http://teachingcenter.ufl.edu/
* Writing Studio, 302 Tigert Hall, 846-1138. Help brainstorming, formatting, and writing papers. http://writing.ufl.edu/writing-studio/

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# University Honesty Policy

UF students are bound by The Honor Pledge which states, “We, the members of the University of Florida community, pledge to hold ourselves and our peers to the highest standards of honor and integrity by abiding by the Honor Code. On all work submitted for credit by students at the University of Florida, the following pledge is either required or implied: “On my honor, I have neither given nor received unauthorized aid in doing this assignment.” The Honor Code (https://www.dso.ufl.edu/sccr/process/student-conduct-honor-code/) specifies a number of behaviors that are in violation of this code and the possible sanctions. Furthermore, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with the instructor or TAs in this class.

*Additional comments regarding academic integrity:*

Students are encouraged to discuss material with each other from the course, help each other understand concepts, study together, and even discuss assessment questions with each other once the quiz window is closed. However, the following is considered academic dishonesty, and I expect that no student will ever do any of the following:

* Have another person complete a quiz in this course
* Copy another student’s quiz in this course
* Collaborate with anyone during a quiz in this course
* Discuss the questions and answers of a quiz with other students while the quiz window is still open
* Manipulate and/or distribute any materials provided in this course for any purpose (including course lecture slides).
* Use any materials provided by a previous student in the course

# University of Florida Complaints Policy and Student Complaint Process

The University of Florida and most instructors believe strongly in the ability of students to express concerns regarding their experiences at the University. Most problems, questions and concerns about courses can be resolved by professionally communicating with the instructor. Please try to meet your instructor in person, make an appointment to call, or try to set up a remote meeting through Skype or other media.

If this does not help the University encourages the students who wish to file a written complaint to submit that complaint directly to the department that manages that course. If a problem really persists and cannot be resolved by communicating with the instructor and the department, contact… for

Residential Course: [https://www.dso.ufl.edu/documents/UF\_Complaints\_policy.pdf.](https://www.dso.ufl.edu/documents/UF_Complaints_policy.pdf)

Online Course:  <http://www.distance.ufl.edu/student-complaint-process>