

MMC 2450 Data Literacy for Communicators

Fall 2019 | Class 19808 | Periods 9-10 Thursdays, Weimer 1078 | 1 credit



Associate Professor Norman P. Lewis, Ph.D.

Office: Weimer 3052

Office hours: Periods 5-6 (11:45a to 1:40p) on Wednesday and Friday

Phone: 352-392-5137 (I respond within 24 hours Monday through Friday)

E-mail: nplewis@ufl.edu (I respond within 24 hours Monday through Friday)

About me: See my [website](#) or follow me (@bikeprof) on [Twitter](#)

Office hours are times devoted to students to drop in, first come, first served. If you have classes then, make an appointment. Or come anytime my door is open.

ABOUT THE COURSE

Course Description

This course grounds you in numeracy so you can correctly interpret and communicate numbers as a media professional. This is not a math course. Rather, it enables you to become literate about data so that you avoid common mistakes made with numbers. The course has no pre-requisite other than sophomore standing and is open to any major.

Course Structure

This is a “flipped” course: Your homework is to watch instructional videos online and come to class to do practice problems. Each week’s online module averages about 40 minutes of videos plus a practice quiz. The class meets for two periods to ensure enough time for practice problems and discussion before taking a graded quiz each week.

Objectives

By the end of the course, you should be able to:

- Communicate numbers and basic statistics to an audience.
- Appraise the validity of statements employing numbers.
- Critique and summarize public opinion surveys.
- Distinguish between random events and meaningful patterns.
- Evaluate assertions about causation, evidence, theory and risk.
- Interpret tables, charts and data visualizations.
- Simplify and contextualize large or complicated numbers.
- Identify cognitive biases that shape interpretation of numbers.
- Use a spreadsheet to calculate, filter and sort numbers.

Required Textbook

“Damned Lies and Statistics,” updated edition, by Joel Best. University of California Press, 2012. ISBN: 978-0520274709 (links to [Amazon](#) and [Barnes & Noble](#))

Laptop Required

You will need a laptop each week to take quizzes and exams and for the spreadsheet lessons. Any type of laptop is OK: Mac, Windows, or Chromebook. The classroom has few electrical outlets, so ensure the laptop has sufficient battery life.

Quizzes and exams will be on Canvas. All but the textbook quiz must (no exceptions) be taken in class. Each classroom quiz and exam will require a password the instructor will provide in class and which cannot be shared with an absent classmate. (That would be cheating.) Also, each will require the lockdown browser, which we will load the first class.

Calculator Encouraged

You may use a calculator in class for quizzes and tests. However, it must be a dedicated calculator. *No phones are allowed.* A \$5 solar calculator works well for this course.

ASSIGNMENTS AND GRADING**Tentative Schedule**

	Date	Theme	Key Topics	Homework	Assessment
1	Aug. 22	Introduction	Gaining numerical confidence		
2	Aug. 29	Evaluating Data	Evidence, proof, theory, hypothesis, limitations	Watch online videos	Q1 in-class
	<i>Sept. 3</i>	<i>Textbook quiz</i>	<i>10 random questions</i>	<i>Assigned text</i>	<i>Book Quiz</i>
3	Sept. 5	Average	Correctly using mean, median and mode	Watch online videos	Q2 in-class
	Sept. 12	No class; professor at conference			
4	Sept. 19	Percent	Portion, change, points, percentile, quartile	Watch online videos	Q3 in-class
5	Sept. 26	Simplify	Spatial comparisons, per capita, rates, ratios	Watch online videos	Q4 in-class
6	Oct. 3	Polling	Sampling error, survey techniques, election polling	Watch online videos	Q5 in-class
7	Oct. 10	Probability & Risk	Relative risk, regression to the mean, gambler's fallacy	Watch online videos	Q6 in-class
8	Oct. 17	Midterm	Everything so far in class; format just like quizzes	Re-watch videos	Midterm
9	Oct. 24	Number Biases	Relativity, price, anchoring, availability	Watch online videos	Q7 in-class
10	Oct. 31	Correlation	Causation, measurement scales, variable types	Watch online videos	Q8 in-class
11	Nov. 7	Visuals	Interpreting tables and charts, discerning error	Watch online videos	Q9 in-class
12	Nov. 14	Sheets 1	Formula, function, averages, percent, percent change, sort	Read Sheets how-to page	Q10 in-class
13	Nov. 21	Sheets 2	Nested sort, rate, filter, calculate on filtered data	None	Q11 in-class
	Nov. 28	No class; Thanksgiving			

Final exam, scheduled by UF, is 12:30 to 2:30 pm Friday, December 13, in the classroom.

Grade Allocation Table

Assessment	Point per question	Number of questions in each quiz or exam	Number of quizzes or exams counted in semester grade	Total points in category for the semester	Percent of semester grade
Quizzes	1	10	10	100	50%
Midterm	1	50	1	50	25%
Final	1	50	1	50	25%
<i>Total</i>				<i>200</i>	<i>100%</i>

For All Quizzes and Exams

- Each correct answer for an exam or a quiz is worth 1 point.
- The course grade is based on 200 questions, or 200 points.
- All questions are multiple-choice, except for the last two quizzes, on spreadsheets.
- For each question, select the *best* answer (not just a right answer).
- Only a dedicated calculator (not a phone) is allowed for quizzes and exams. No other sources (notes, PowerPoints, other websites, etc.) are permitted.
- Quizzes and exams are drawn randomly from question banks.
- All quizzes and exams are cumulative.
- Quizzes will be 70% from that week's lesson and 30% cumulative.
- You will have an average of 2 minutes on each question for quizzes and exams.

Quizzes (100 points, or 50% of course grade)

Each quiz has 10 questions worth 1 point each. During the semester, you will have 12 quizzes. One, on the textbook, will be online. The other 11 will be administered in class.

- *Book.* One quiz is on the assigned textbook, "Damned Lies and Statistics." (Read the entire book; it's not long.) The quiz will be online through Canvas until 11:39 p.m. Tuesday, Sept. 3.
- *In-Class.* Quizzes will be given weekly in class, starting week 2, except for exams. These quizzes presume you have watched the instructional videos before class. Not everything in the videos will be discussed in class. Quizzes will draw from the videos and not just practice problems done in class. They are multiple-choice quizzes until the two spreadsheets classes.

The 10 highest quiz scores out of 12 count toward the semester grade, and the low 2 drop.

Student Success Hint: Students who skip the online videos and just come to class tend to get lower grades than those who prepare.

Midterm (50 points, or 25% of course grade)

The midterm has 50 questions worth 1 point each. Questions will be in the style of the quizzes. You are welcome to review quizzes during office hours if you wish. However, I write the questions not from the quizzes but from reviewing the videos. Therefore, the best study strategy is to re-watch the videos.

Final (50 points, or 25% of course grade)

Like the midterm, the final has 50 questions worth 1 point each. If you have more than two exams on that day, UF policy determines which one is to be rescheduled. Please let me know early in the semester if that situation applies to you. Otherwise, the final exam cannot be rescheduled to accommodate personal schedules.

About LockDown Browser

This course requires the use of LockDown Browser by Respondus for quizzes and exams. This browser blocks access to the rest of Canvas (so no peeking at the online videos), or to any other site on the Internet, or any other application on your computer. It prevents anyone from using notes or Googling answers, and thus helps ensure a level playing field.

You can learn more about the LockDown Browser by watching this [video](#). (Note: We will use only the LockDown Browser, not the Respondus Monitoring webcam feature.)

Before the first class, download the LockDown Browser to your laptop from this [website](#). During the first class, we will test the installation with a practice quiz. We will

1. Start the LockDown Browser
2. Log onto Canvas
3. Navigate to the quiz

Note access to each quiz and exam can be made *only* through LockDown Browser. If you try to access a quiz or exam through a conventional browser such as Chrome, Firefox, or Safari, Canvas will generate an error message and forbid access.

Attendance

Attendance is expected. Course requirements for attendance, make-up exams, assignments and other work are consistent with UF [policy](#).

For absences covered by UF policy, such as illness, a makeup is allowed if the absence is (a) covered by UF policy, and (b) you notify the instructor at least 30 minutes *before* class and *promptly* (within a couple of days) provide documentation if requested. You must complete the makeup quiz or exam before taking the next scheduled one.

Grading Scale

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

Scores are rounded to the nearest whole point: 89.4 rounds down to 89 (B+) while 89.5 rounds up to 90 (A-). The [UF grading policy](#) details how GPA is computed.

OTHER IMPORTANT DETAILS

Academic Integrity

UF students pledge to abide by an [honor code](#) that prohibits academic dishonesty such as fabrication, plagiarism and cheating. You have an affirmative obligation to understand what constitutes academic dishonesty. You also must report to appropriate personnel any condition that facilitates academic misconduct. If you have any questions or concerns, please contact me.

When I discover cheating, my default policy is to fail all involved for the entire course and report the details to the Dean of Students Office.

Course Evaluations

Students are expected to provide professional and respectful feedback on the quality of instruction in this course by completing course evaluations online via GatorEvals. Students will be notified when the evaluation period opens, and can complete evaluations through the email they receive from GatorEvals, in their Canvas course menu under GatorEvals, or via this [link](#). Summaries of course evaluation [results](#) are available to students.

Students with Disabilities

Students with disabilities requesting accommodations should first register with the [Disability Resource Center](#) (352-392-8565) by providing appropriate documentation. Once registered, students will receive an accommodation letter, which must be presented to me when requesting accommodation. Such requests should be made as soon as possible – preferably at the start of the semester – so that I can adjust to the accommodation and therefore assist you in your learning.

Health and Wellness

Your well-being is important to the University of Florida. The U Matter, We Care initiative is committed to creating a culture of care on campus by encouraging everyone to look out for one another and to reach out for help if a person is in need.

If you or a friend is in distress, please contact umatter@ufl.edu so that the U Matter, We Care Team can reach out to the student in distress. A crisis counselor is available, including nights and weekends, by calling 352-392-1575.

The U Matter, We Care team can help connect students to many other helping resources including, but not limited to, victim advocates, housing staff, and the Counseling and Wellness Center. Asking for help is a sign of strength.

In case of emergency, call 911.

Academic Resources

- E-learning technical support: 352-392-4357 (select option 2) or e-mail to Learningsupport@ufl.edu or reach the [website](#).
- For career advice and planning, or even help selecting a major or minor, contact the [Career Resource Center](#) in the Reitz Union, 392-1601.
- For help in finding resources, ask a UF librarian through [Library Support](#).
- General study skills and tutoring available from the [Teaching Center](#), Broward Hall, 392-2010 or 392-6420.