

# MMC 2450 Data Literacy for Communicators

Spring 2020 | Class 17719, Section 24G3 | Periods 4-5 Wednesdays, Weimer 1070 | 1 credit

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## Associate Professor Norman P. Lewis, Ph.D.

Office: Weimer 3052

Office hours: Wednesdays 2:00 to 4:00 pm / Thursdays 10:00 am to noon

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Office hours are times devoted to students to drop in, first come, first served. If you have classes during those 4 hours, 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. It is open to any major.

### Course Structure

This is a “flipped” course. Generally, your homework is to watch instructional videos online and come to class to do practice problems and take quizzes. 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 and discussion before taking a graded quiz each week.

### Objectives

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

- Communicate numerical information correctly to a general 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](#))

**Calculator Allowed**

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.

**Laptop Required**

You will need a laptop each week to take quizzes and exams. Any type of laptop is OK: Mac, Windows, or Chromebook. Each quiz or exam requires the LockDown browser, which we will load the first class. Each is protected by a password the instruction will provide in class and which cannot be shared with an absent classmate. Doing so counts as cheating.

**ASSIGNMENTS AND GRADING****Tentative Schedule**

	Date	Theme	Key Topics	Homework	Assessment
1	Jan. 8	Introduction	Gaining numerical confidence	After this class, review PPT	
2	Jan. 15	Evaluating Data	Evidence, proof, theory, hypothesis, limitations	Watch online videos	Q1 Evaluate
	11:39 pm Jan. 20	Textbook quiz	10 random questions from the assigned textbook; taken online	Assigned text, "Damned Lies"	Q2 Book
3	Jan. 22	Average	Correctly using mean, median and mode	Watch online videos	Q3 Average
4	Jan. 29	Percent	Portion, change, points, percentile, quartile	Watch online videos	Q4 Percent
5	Feb. 5	Simplify	Spatial comparisons, per capita, rates, ratios	Watch online videos	Q5 Simplify
6	Feb. 12	Polling	Sampling error, survey techniques, election polling	Watch online videos	Q6 Polling
7	Feb. 19	Probability & Risk	Relative risk, regression to the mean, gambler's fallacy	Watch online videos	Q7 Probability
8	Feb. 26	Midterm	Everything so far in class; format just like quizzes	Re-watch videos	Midterm
	March 4	Spring break; no class			
9	March 11	Number Biases	Relativity, price, anchoring, availability	Watch online videos	Q8 Biases
10	March 18	Correlation	Causation, measurement scales, variable types	Watch online videos	Q9 Correlation
11	March 25	Visuals	Interpreting tables and charts, discerning error	Watch online videos	Q10 Visuals
12	April 1	Discernment	Putting it all together: how to evaluate numerical claims	Watch online videos	Q11 Discern
13	April 8	Sheets	Formula, function, averages, percent, percent change, sort	None	Q12 Sheets
14	April 15	Review	Practice questions in class to cover the semester	Re-watch videos	Q13 Review
15	April 22	Exam 2	Entire semester (cumulative); format like quizzes, midterm	Re-watch videos	

**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 <b>points</b> in category for the semester	<b>Percent</b> of semester grade
Quizzes	1	10	10	100	50%
Midterm	1	50	1	50	25%
Exam 2	1	50	1	50	25%
<i>Total</i>				<i>200</i>	<i>100%</i>

**For All Quizzes and Exams**

- Each correct answer for a quiz or an exam is worth 1 point.
- All questions are multiple-choice.
- For each question, select the *best* answer (not just a “right” answer).
- Notes are not permitted for quizzes or exams.
- A dedicated calculator (not a phone) is encouraged for quizzes and exams.
- Canvas draws quiz and exam questions randomly from question banks.
- All quizzes and exams are cumulative, except for the textbook.
- Textbook questions appear only on the book quiz and on no other quiz or exam.
- Exams are drawn from the video lessons plus the PowerPoint to be discussed in the first class. That PowerPoint will be posted to Canvas after the first class.
- 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.
- Canvas only gives a total score for each quiz and exam. To discover which questions you got right or wrong, come to office hours any time.

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

Each quiz has 10 questions worth 1 point each. During the semester, you will have 13 quizzes. You take the textbook quiz on your own. The other 12 are done in class.

- *Book Quiz.* This is on “Damned Lies and Statistics.” (Read the entire book; it’s not long.) The quiz will be on Canvas until 11:59 p.m. Monday, Jan. 20.
- *In-Class.* Quizzes will be given weekly in class, starting week 2, except for exams. These quizzes presume you have watched the videos before class. Not everything in the videos will be discussed in class. Quiz questions are drawn from the videos.

The 10 highest quiz scores out of 13 count toward the semester grade.

**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. I write the questions not from the quizzes but from reviewing the videos and the first-week PowerPoint. Therefore, the best study strategy is to re-watch the videos.

**Exam 2 (50 points, or 25% of course grade)**

Like the midterm, the final has 50 questions worth 1 point each. Questions cover the entire course, including all online videos and the first-week PowerPoint.

### 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 *only* if the absence is (a) covered by UF policy, and (b) you notify the instructor at least 30 minutes *before* class and within a couple of days provide documentation if requested. It is your responsibility to complete the makeup quiz or exam before taking the next scheduled one.

If you know you are going to be absent, you can take the quiz ahead of class if you get advance permission and bring your laptop to my office hours on Wednesday afternoons or Thursday mornings. Those are the only times quizzes can be given in advance.

### 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 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://sccr.dso.ufl.edu/process/student-conduct-code>) specifies a number of behaviors that are in violation of this code and the possible sanctions. Also, you are obligated to report any condition that facilitates academic misconduct to appropriate personnel. If you have any questions or concerns, please consult with 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. Guidance on how to give feedback in a professional and respectful manner is available at <https://gatorevals.aa.ufl.edu/students/>. 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 <https://ufl.bluera.com/ufl/>. Summaries of course evaluation results are available to students at <https://gatorevals.aa.ufl.edu/public-results/>.

### Students with Disabilities

Students with disabilities who experience learning barriers and would like to request academic accommodations should connect with the disability Resource Center by visiting [disability.ufl.edu/students/get-started](http://disability.ufl.edu/students/get-started). It is important for students to share their accommodation letter with their instructor and discuss their access needs, as early as possible in the semester.

### 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](mailto: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](mailto: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.