MMC 2450 Data Literacy for Communicators  
Spring 2020 | Class 23588, Section NUM3 | Periods 9-10 Tuesdays, Little Hall 0217 | 1 credit

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Office hours are times devoted to students to drop in, first come, first served. If you have classes during the designated hours, please make an appointment.

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  
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 instructor will provide in class and which cannot be shared with an absent classmate. Doing so counts as cheating.

ASSIGNMENTS AND GRADING

<table>
<thead>
<tr>
<th>Date</th>
<th>Theme</th>
<th>Key Topics</th>
<th>Homework</th>
<th>Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Jan. 7</td>
<td>Introduction</td>
<td>Gaining numerical confidence</td>
<td>After this class, review PPT</td>
<td></td>
</tr>
<tr>
<td>2 Jan. 14</td>
<td>Evaluating Data</td>
<td>Evidence, proof, theory, hypothesis, limitations</td>
<td>Watch online videos</td>
<td>Q1 Evaluate</td>
</tr>
<tr>
<td>11:59 pm</td>
<td>Textbook quiz</td>
<td>10 random questions from the assigned textbook;</td>
<td>Assigned text, “Damned Lies”</td>
<td>Q2 Book</td>
</tr>
<tr>
<td>Jan. 20</td>
<td></td>
<td>taken online</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 Jan. 21</td>
<td>Average</td>
<td>Correctly using mean, median and mode</td>
<td>Watch online videos</td>
<td>Q3 Average</td>
</tr>
<tr>
<td>4 Jan. 28</td>
<td>Percent</td>
<td>Portion, change, points, percentile, quartile</td>
<td>Watch online videos</td>
<td>Q4 Percent</td>
</tr>
<tr>
<td>5 Feb. 4</td>
<td>Simplify</td>
<td>Spatial comparisons, per capita, rates, ratios</td>
<td>Watch online videos</td>
<td>Q5 Simplify</td>
</tr>
<tr>
<td>6 Feb. 11</td>
<td>Polling</td>
<td>Sampling error, survey techniques, election poll</td>
<td>Watch online videos</td>
<td>Q6 Polling</td>
</tr>
<tr>
<td>7 Feb. 18</td>
<td>Probability &amp; Risk</td>
<td>Relative risk, regression to the mean, gambler’s fallacy</td>
<td>Watch online videos</td>
<td>Q7 Probability</td>
</tr>
<tr>
<td>8 Feb. 25</td>
<td>Midterm</td>
<td>Everything so far in class; format just like quizzes</td>
<td>Re-watch videos</td>
<td>Midterm</td>
</tr>
<tr>
<td>9 March 3</td>
<td>Spring break; no class</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10 March 10</td>
<td>Number Biases</td>
<td>Relativity, price, anchoring, availability</td>
<td>Watch online videos</td>
<td>Q8 Biases</td>
</tr>
<tr>
<td>11 March 17</td>
<td>Correlation</td>
<td>Causation, measurement scales, variable types</td>
<td>Watch online videos</td>
<td>Q9 Correlation</td>
</tr>
<tr>
<td>12 March 24</td>
<td>Visuals</td>
<td>Interpreting tables and charts, discerning error</td>
<td>Watch online videos</td>
<td>Q10 Visuals</td>
</tr>
<tr>
<td>13 March 31</td>
<td>Discernment</td>
<td>Putting it all together: how to evaluate numerical claims</td>
<td>Watch online videos</td>
<td>Q11 Discern</td>
</tr>
<tr>
<td>14 April 7</td>
<td>Sheets</td>
<td>Formula, function, averages, percent, percent change, sort</td>
<td>None</td>
<td>Q12 Sheets</td>
</tr>
<tr>
<td>15 April 14</td>
<td>Review</td>
<td>Practice questions in class to cover the semester</td>
<td>Re-watch videos</td>
<td>Q13 Review</td>
</tr>
<tr>
<td>16 April 21</td>
<td>Exam 2</td>
<td>Entire semester (cumulative); format like quizzes, midterm</td>
<td>Re-watch videos</td>
<td></td>
</tr>
</tbody>
</table>
Grade Allocation Table

<table>
<thead>
<tr>
<th>Assessment</th>
<th>Point per question</th>
<th>Number of questions in each quiz or exam</th>
<th>Number of quizzes or exams counted in semester grade</th>
<th>Total points in category for the semester</th>
<th>Percent of semester grade</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quizzes</td>
<td>1</td>
<td>10</td>
<td>10</td>
<td>100</td>
<td>50%</td>
</tr>
<tr>
<td>Midterm</td>
<td>1</td>
<td>50</td>
<td>1</td>
<td>50</td>
<td>25%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>1</td>
<td>50</td>
<td>1</td>
<td>50</td>
<td>25%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td></td>
<td></td>
<td>200</td>
<td>100%</td>
</tr>
</tbody>
</table>

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. Quiz questions will be taken from the entire book.) 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 the 13 quizzes 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 provide documentation within a couple of days after the absence, if requested. It is your responsibility to make arrangements to complete the makeup quiz or exam within one week of your return to class.

Grading Scale

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percent</th>
<th>Percent</th>
<th>Percent</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>100-93%</td>
<td>B+</td>
<td>89-87%</td>
<td>C+</td>
</tr>
<tr>
<td>A-</td>
<td>92-90%</td>
<td>B-</td>
<td>82-80%</td>
<td>C-</td>
</tr>
<tr>
<td>B</td>
<td>86-83%</td>
<td>C</td>
<td>76-73%</td>
<td>D</td>
</tr>
<tr>
<td>B+</td>
<td>89-87%</td>
<td>C+</td>
<td>79-77%</td>
<td>D+</td>
</tr>
<tr>
<td>D</td>
<td>66-63%</td>
<td>D</td>
<td>62-60%</td>
<td></td>
</tr>
<tr>
<td>D+</td>
<td>69-67%</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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. 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 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.