MMC 2450 Data Literacy for Communicators

Fall 2023 | Class 21253, Section UFOD | 100% Online | 1 credit



Associate Professor Bernell E. Tripp, Ph.D.

Office:3055 Weimer HallOffice Phone:352-392-2147E-mail:btripp@jou.ufl.edu (preferred) or message through Canvas (I usually
respond within 24 hours most days.)Office hours:Tuesdays 2-5 pm in person/ All other available times by appointment, in-
person or via Zoom.

Office hours are devoted to one-on-one sessions (first-come, first-served) to go over your quiz or exam answers with you or to review any questions you may have about course material. However, I am happy to meet with you at any other mutually agreeable time to discuss your course questions or concerns.

ABOUT THE COURSE

Course Description

This course grounds you in numeracy so you can correctly interpret and communicate numbers, which will allow you to enter the workplace with confidence in your logical-thinking abilities about numbers. Because this is NOT a math course, the only pre-requisite is sophomore standing. It is open to any major.

Course Structure

This course is <u>fully online</u>, through Canvas. Formal lecture instructions are in videos, with no outside readings or textbook. All assessments are multiple-choice questions for weekly quizzes and two exams. All online testing is <u>proctored with Honorlock</u>, which provides me with videos to monitor guideline compliance.

This course is fully asynchronous. Deadlines allow you to pace yourself and keep up with the material. However, you can work ahead or even complete the course in a few days. Because of that work-ahead feature, deadlines are firm. No extensions are allowed unless extenuating circumstances arise in accordance with UF policies.

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.
- Apply average and percentage to everyday life.
- Determine when numbers require normalization.
- Critique and summarize public opinion surveys.
- Distinguish between random events and meaningful patterns.
- Evaluate assertions about causation, evidence, theory and risk.

- Interpret tables and other common 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/ Materials and Supplies Fee

None.

ASSIGNMENTS AND GRADING

Deadlines are firm. (All modules can be completed ahead of the deadline. *)

| | Deadline | Theme | Key Topics | Assessment |
|----|----------------------------|------------------|--|------------------|
| 1 | 11:59 pm | Introduction | How data literacy differs from math; three | (none) |
| | Sat, Aug. 26 | | course principles | |
| 2 | 11:59 pm | Data Logic | Distinguish among terms such as error and | Q1 Data Logic |
| | Sat, Sept. 2 | | theory; identify factors affecting comparisons | |
| 3 | 11:59 pm | Average | Calculate and apply mean, median, and mode | Q2 Average |
| | Sat, Sept. 9 | | while avoiding common errors | |
| 4 | 11:59 pm | Percent | Calculate and apply percentages and | Q3 Percent |
| | Sat, Sept. 16 | | percentiles while avoiding common errors | |
| 5 | 11:59 pm | Simplify | Simplify and contextualize large numbers in | Q4 Simplify |
| | Sat, Sept. 23 | | terms of individuals, time, area, and volume | |
| 6 | 11:59 pm | Surveys | How to interpret surveys and polls, identify | Q5 Surveys |
| | Sat, Sept. 30 | | ways results can differ, and detect errors | |
| 7 | 11:59 pm | Sheets | Use Google Sheets to calculate average, | Q6 Sheets |
| | Sat, Oct. 7 | | percentage, total, and rate, and sort and filter | |
| 8 | 11:59 pm | Midterm Review & | Review course so far | Midterm |
| | Sat, Oct. 14 | Midterm Exam | Take midterm: 50 random questions | |
| 9 | 11:59 pm | Probability | Calculate three types of probability to avoid | Q7 Probability |
| | Sat, Oct. 21 | | common misinterpretations; two types of risk | |
| 10 | 11:59 pm | Number Biases | How anchoring bias, availability heuristic, | Q8 Number Biases |
| | Sat, Oct. 28 | | price bias, and relativity trap skew numbers | |
| 11 | 11:59 pm | Correlation | Discern between causation and correlation; | Q9 Correlation |
| | Sat, Nov. 4 | | four types of variables; experiment types | |
| 12 | 11:59 pm | Visuals | Read tables, charts, and maps to avoid abuse | Q10 Visuals |
| | Sat, Nov. 11 | | and misinterpretations; hurricane maps | |
| 13 | 11:59 pm | Number Abuse | Skepticism vs. cynicism; dubious data vs. | Q11 Number Abuse |
| | Sat, Nov. 18 | | empiricism; cherry-picking; interpreting rates | |
| 14 | 11:59 pm | Writing | Best ways to write about numbers, including | Q12 Writing |
| | Sat, Dec. 2 | | simplification and rounding | |
| 15 | 11:59 pm | Final Review | Review second half of course (revisit Midterm | Q13 Review |
| | Sat, Dec. 9 | | review on your own); take a cumulative quiz | |
| 16 | 11:59 pm | Final Exam | Final: 50 random questions; cumulative. | Final Exam |
| | <mark>Thu, Dec. 14*</mark> | | (Note that deadline is not a Saturday.) | |

* You can work ahead and complete the course in a few weeks, so <u>deadlines are firm</u>. Deadlines are <u>Saturday night (skipping spring break week) except for the final exam</u>. The final exam deadline is 11:59 pm Thursday, Dec. 14.

Grading Categories

| Category | Points | Grade Pct |
|--|--------|-----------|
| Weekly quizzes (best 10 out of 13 count) | 100 | 50% |
| Midterm exam | 50 | 25% |
| Final exam | 50 | 25% |
| Total | 200 | 100% |

No extra credit points exist, but you do have two ways to boost your quiz scores (see below).

Grading Scale

| | Percent | | Percent | | Percent | | Percent |
|----|------------|----|------------|----|------------|----|------------|
| | | B+ | 89.4-86.5% | C+ | 79.4-76.5% | D+ | 69.4-66.5% |
| А | 100-92.5% | В | 86.4-82.5% | С | 76.4-72.5% | D | 66.4-62.5% |
| A- | 92.4-89.5% | B- | 82.4-79.5% | C- | 72.4-69.5% | D- | 62.4-59.5% |

About Quizzes and Exams

- 1. **Cumulative:** Quizzes and exams are cumulative.
 - a. After the first quiz, 7 questions are from that module and 3 are cumulative.
 - b. The midterm covers the first half. The final exam covers the entire course.
- 2. **Points:** Each correct answer, whether in a quiz or exam, is worth 1 point.
 - a. Each quiz has 10 questions.
 - b. Each exam has 50 questions.
- 3. **Quiz Allowances:** In lieu of extra credit, two options allow you to boost your grade.
 - a. Of the 13 quizzes, the low 3 scores drop and the best 10 count.
 - b. For the last (13th) quiz, you get 2 attempts; the better score counts.
- 4. **Random**: Quizzes and exams are drawn at random from question banks.
 - a. Quiz questions accumulate, so they may repeat in future quizzes.
 - b. Each exam is drawn from a fresh question bank, not from previous quizzes.
- 5. **Time:** You have an average of 2.5 minutes per question for quizzes and exams.
 - a. 25 minutes for each <u>quiz</u> (10 questions X 2.5 = 25 minutes).
 - b. For the last (13th) quiz, with 2 attempts, 50 minutes are allowed.
 - c. 125 minutes for each <u>exam</u> (50 questions X 2.5 = 125 minutes).
- 6. Multiple-choice: Each question has four answer options.
 - a. For each question, select the *best* (not just a "right") answer.
 - b. No answer option is "all of the above" or "none of the above."

Quiz and Exam Honesty Requirements

- **Allowed:** A computer to take the exam, with only the quiz or exam visible or audible, in a quiet room in which you are alone. A dedicated calculator (not a phone). A single sheet of blank-on-both-sides scratch paper. A pen or pencil.
- **Not allowed**: Anything else, such as humans, notes, course videos, other web pages or websites, phone, tablet, programmable calculator, headphones, earbuds, etc.

About Honorlock

All quizzes and exams use Honorlock, a proctoring service. It works only with the <u>Chrome</u> browser. The quiz in **the Introduction module** uses Honorlock so you can become familiar with it. If you have not used Honorlock before, it will prompt you to install a Chrome extension. For more about Honorlock, the UF business school has a helpful <u>guide</u>.

No Extensions

Because everything in the course can be done early, allowances for missing deadlines are unneeded. All schedule conflicts such as religious observances or sporting events can be resolved by taking the quiz or exam early. The only exception is for both unforeseen and chronic events, as covered by UF policy.

Instead, **please complete the first two modules in the first week**. They were made to be combined. That way, you'll start out a week ahead – which means a little less stress later when life throws a curveball at you on deadline.

Three of the Best Ways to Help Your Grade

- View ALL the videos and make sure you understand the main points of the lesson *before* taking the graded quiz. For each module, (a) watch the videos one at a time, without interruption, and take notes, (b) do the practice quiz, and then (c) watch each video a second time.
- 2. Work ahead. Complete the first two modules in the first week. (They were made to be combined.) Continue to work ahead to improve memory recall and performance.
- 3. Contact me right away, and often, with any questions. We can review quizzes by Zoom or in-person so that you won't miss a similar question twice.

Another Success Strategy (Advice for Previous Students)

Given that the course is cumulative, and memories are fleeting, one strategy is to complete the course as quickly as possible at the start of the semester. That has two benefits. First, it lets you take each quiz and the two exams while concepts are fresh. Second, completing this course early lets you devote more time and attention to other courses.

Technical Assistance

If you encounter technology difficulties, contact technicians as soon as possible via the UF Computing Help Desk <u>website</u>, or phone 24/7 at 352-392-4357, or email <u>helpdesk@ufl.edu</u>.

FAQs

Q. Can I really do the course all at once?

A. Yes. Doing so might improve your grade. If you complete the course in a tight time frame, you're more likely to remember earlier material than if you look at it only once a week. *(However, make sure you fully understand the material <u>before</u> attempting the quiz or moving ahead to the next module.)*

Q. This is a 1-credit course, which means passing is guaranteed, right?

A. No. Although the material will be a review for most students, and although I would love for everyone to pass this course the first time, unfortunately, some students end up retaking the class. Be assured that I am happy to meet with you to assist your learning before taking the next quiz or exam.

Q. Canvas won't show me the answers. How do I know what questions I missed?

A. Answers are not shown to preserve the integrity of the assessments. However, I am happy to review any quiz or exam with you over Zoom or in person.

Q. How do I schedule an appointment to review my quiz results?

A. If you have a conflict during my regular office hours, email me, and we'll set up a time that is mutually convenient. Advance notice also gives me time to review your quiz responses to try to pinpoint any patterns to help us figure out where you went wrong in your answer selection.

Q. How long does it take to do each module?

A. About 40 minutes of instruction followed by a 25-minute quiz or a two-hour exam. Many find it useful to watch the videos twice before taking the quiz or exam.

Q. Isn't there anything else, like Canvas discussion posts or a written report?

A. No. Only 13 quizzes and 2 exams.

Q. What if I have a (insert reason here) on Saturday? Can I get an extension?

A. No. Because the course can be completed in the first week, deadlines are firm. The *due* date does not have to be the *do* date. The entire course is available from the first day of class so that you can work ahead. Be ahead, and you'll get ahead.

Q. What if I have a technical glitch that's not my fault, like my Wi-Fi signal going out?

A. If the Wi-Fi goes out, your phone can serve as a hotspot. If you have not done that before, watch this <u>video</u> now, so that you're prepared. If the technical issue is with Canvas, you can file a ticket with the UF Computing <u>Help Desk</u>.

Q. If I bomb the midterm, can I do something for extra credit?

A. No extra credit is possible in this course because no options fit the teaching purpose of this 1-credit class. Instead, the low 3 quiz scores drop, and you get 2 tries on the last quiz.

Q. That sounds scary. How do I prepare for the exams?

A. The quizzes prepare you for the exams. Each exam is exactly like the quizzes, only with a fresh batch of questions. You also have a review quiz and video answers before each exam. Also, you can review your quizzes with me for clarification about anything that is confusing.

Q. Can I use a calculator during quizzes and exams?

A. Yes: A dedicated solar calculator (not a phone) such as a TI-30 is sufficient. Only a very basic calculator is needed to perform the simple calculations required.

Q. If my calculator is missing, can I use my phone?

A. No. Use of a phone or other electronic device during a quiz or exam constitutes academic misconduct. However, you will be able to access the basic on-screen calculator app on the computer you are using to complete the quiz or exam.

Q. Can I use note paper?

A. Yes, if blank on both sides. Show both sides to the video camera at the start of Honorlock's recording.

Q. Can we use a cheat sheet or peek at the videos while taking a quiz or exam?

A. No. You cannot navigate away from the quiz/exam window or open additional windows onscreen.

Q. Can I consult a friend or family member?

A. No. Honorlock expects you to be alone in a quiet room. No other voices or strategic noises are allowed.

Q. When will I know how I did on the quiz or exam?

A. Canvas will record your score immediately.

Q. I watched the videos but still got questions wrong. Why?

A. Engaging in distractions while watching the videos tend to be a primary obstacle to learning the material. Eliminating multitasking distractions and writing your notes (instead of trying to compile notes electronically) should help with your retention of information. (Research shows the physical act of writing improves retention.) Also, reviewing your answers with me and working through any problems together might help clear up potential misunderstandings in the lecture materials.

Q. I'm not good at math. Why do I have to take this course?

A. This course is not about math, but about *applying* math to everyday communication. In today's data-driven world, no one can avoid numbers. Further, studies show that audiences are unforgiving of numerical mistakes, and become prone to distrust the source.

Q. I prefer face-to-face classes. Why is this one online?

A. This course used to be all or partly in person. But students rightfully complained they saw the in-class material only once and could not review it at home before exams. In 2020, the course was rebuilt to be fully online so students could have all materials available on demand. It also became asynchronous so that students could fit the course into their personal schedules and could work ahead to retain material and improve their grades.

KEY TAKEAWAY POINTS TO REMEMBER:

- 1. Work ahead! Deadlines are firm. A missed deadline becomes one of your three lowest-score drops.
- 2. No extra credit is possible. Instead, the three low quiz scores are dropped, which covers most illnesses and life events. Also, you have two attempts at Quiz 13, the final review.
- 3. No quiz or exam answers are shown to preserve academic integrity. However, I am happy to review quizzes and exams in person or by Zoom, as often as you like.

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 (<u>https://sccr.dso.ufl.edu/process/student-conduct-code</u>) 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.

Honorlock provides me with a video of each quiz or exam session, as well as a transcript and any suspicions the AI or human proctor might have about potential cheating incidents. Violations, especially multiple incidents of "high-risk of cheating" citations, can result in a failing grade for the course and referral to the dean of students.

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 the <u>get-started page</u>. It is important to share any accommodation letter with me and discuss access needs as early as possible in the semester.

Diversity

The College of Journalism and Communications embraces an intellectual community enriched and enhanced by diversity along several dimensions, including race, ethnicity and national origins, gender and gender identity, sexuality, class, and religion. Each course is expected to help foster an understanding of the diversity of peoples and cultures and of the significance and impact of mass communications in a global society. To that end:

1. Please let me know if you find any material in the course that violates those expectations.

- 2. Please alert me if you have a name or preferred pronouns that differ from the class roll information, which is my only source of information about you.
- 3. Please let me know if something said or done in the classroom, by either myself or other students, is particularly troubling or causes discomfort or offense.
- 4. If you have any concerns involving diversity in this course that you feel uncomfortable discussing with me, please contact Professor Joanna Hernandez, CJC director of inclusion and diversity, at <u>jhernandez@jou.ufl.edu</u>.

Course Evaluations

Please provide 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 <u>available</u>. You will be notified when the evaluation period opens. Students can complete evaluations through the email they receive from GatorEvals, in the Canvas course menu under GatorEvals, or via the <u>Gatorevals website</u>. Summaries of course evaluation results are <u>publicly available</u>.

In-Class Recording

Because this is an asynchronous, online course, there are no class lectures to record.

All the "lectures" in this course are videos which you can watch as often as you like. They are copyrighted by UF, which means they cannot be copied or shared. Likewise, all quiz and exam questions are protected to preserve academic integrity. They cannot be copied, even for personal use. But as noted earlier, I am happy to review your answers with you in person or online, as often as you like.

Otherwise, here is the official UF statement regarding in-class recording:

Students are allowed to record video or audio of class lectures. However, the purposes for which these recordings may be used are strictly controlled. The only allowable purposes are (1) for personal educational use, (2) in connection with a complaint to the university, or (3) as evidence in, or in preparation for, a criminal or civil proceeding. All other purposes are prohibited. Specifically, students may not publish recorded lectures without the written consent of the instructor.

A "class lecture" is an educational presentation intended to inform or teach enrolled students about a particular subject, including any instructor-led discussions that form part of the presentation, and delivered by any instructor hired or appointed by the University, or by a guest instructor, as part of a University of Florida course. A class lecture does not include lab sessions, student presentations, clinical presentations such as patient history, academic exercises involving solely student participation, assessments (quizzes, tests, exams), field trips, private conversations between students in the class or between a student and the faculty or lecturer during a class session.

Publication without permission of the instructor is prohibited. To "publish" means to share, transmit, circulate, distribute, or provide access to a recording, regardless of format or medium, to another person (or persons), including but not limited to another student within the same class section. Additionally, a recording, or transcript of a recording, is considered published if it is posted on or uploaded to, in whole or in part, any media platform, including but not limited to social media, book, magazine, newspaper, leaflet, or third-party note/tutoring services. A student who publishes a recording without written consent may be subject to a civil cause of action instituted by a person injured by the publication and/or discipline under UF Regulation 4.040 Student Honor Code and Student Conduct Code.

Health and Wellness

- **U Matter, We Care:** If you or someone you know is in distress, please contact umatter@ufl.edu, 352-392-1575, or visit U Matter, We Care <u>website</u> to refer or report a concern and a team member will reach out to the student in distress.
- **Counseling and Wellness Center:** Visit the Counseling and Wellness Center <u>website</u> or call 352-392-1575 for information on crisis services as well as non-crisis services.
- **Student Health Care Center:** Call 352-392-1161 for 24/7 information to help you find the care you need or visit the Student Health Care Center <u>website</u>.
- University Police Department: Visit UF Police Department <u>website</u> or call 352-392-1111 (or 911 for emergencies).
- **UF Health Shands Emergency Room / Trauma Center:** For immediate medical care call 352-733-0111 or go to the emergency room at 1515 SW Archer Road, Gainesville. Visit the UF Health Emergency Room and Trauma Center <u>website</u>.

Academic Resources

- **E-learning technical support:** Contact the UF Computing Help Desk <u>website</u>, or phone 24/7 at 352-392-4357, or email <u>helpdesk@ufl.edu</u>.
- **Career Connections Center:** Career assistance and counseling services. Visit the <u>website</u>. Reitz Union Suite 1300, 352-392-1601.
- Library Support: Various ways to receive assistance with respect to using the libraries or finding resources. Visit the <u>website</u>.
- **Teaching Center:** General study skills and tutoring. Visit the <u>website</u>. Broward Hall, 352-392-2010 or to make an appointment 352- 392-6420.
- **Online Student Complaints:** View the Distance Learning Student Complaint Process <u>website</u>.