

Course Syllabus

SIADS 523: Communicating Data Science Results (Fall 2023)

Course Overview and Prerequisites

Data scientists need to be able to present their analyses to clients and stakeholders, sometimes “translating” to those without statistical or data fluency. You will learn strategies for effective visual, written, and oral communication and create a technical report and oral presentation for your professional portfolio.

Prerequisite: SIADS 522

Instructor and Course Assistants

- Instructor: Nick Sheltroun
- Instructional Staff: Merve Hickok, Jungseo (Aurora) Lee

Communication Expectations

- **Contacting your instructor and course assistant(s):** Course channel in Slack ([siads523_fa23_004](#))
- **Email response time:** 24-48 hours; use only for questions or concerns that cannot be answered in a public forum.
- **Slack response time:** Slack is preferred for questions relating to course structure, assignment clarifications, and other questions and conversations that the group would benefit from. Posts received by 7pm Eastern will receive a same-day response; posts after 7pm Eastern will receive a response within 24 hours. As has been done in other MADS classes, we are going to set up separate threads for each week under which you can post your questions. If you'd like to ask a private question, please send a direct message to all instructional staff, instead of to an individual instructor, so that your questions can be answered more quickly. This also helps keep the instructional staff on the same page as we work through issues, because we see each other's answers.

Required Textbook

Knaflic, Cole Nussbaumer. 2015. *Storytelling With Data: The Effective Visual Communication of Information*. John Wiley & Sons Inc. ISBN-13: 978-1119002253. Electronic copy available [via MLibrary](#) (login credentials required).

OPTIONAL: Duarte, Nancy. 2019. [Data Story](#). [Santa Clara, CA]: Ideapress. ISBN-13 978-1940858982.

You will be given a list of required and recommended readings within the course. Online access to these readings are provided through the University of Michigan Library or through approved online sources. For resources provided through the library, you will be asked to sign in with your UMich username and password to access these materials.

Technology Requirements (unique to this course)

All course activities can be completed using core MADS technology. Students may choose from a variety of tools -- including software they own or can access for free that is not part of the MADS package -- to complete course requirements. For example, students wishing to go beyond the provided templates and create custom designs may opt to use graphic tools of their choice, and students However, some students may wish to trace, and then adapt, existing visualizations. For those who do, we recommend but do not require the free, open-source tool [Inkscape](#) (a tutorial is provided in Week 3). While you do not need to conduct any computational analysis for this course, optional blank Jupyter notebooks are available for those who would like them. However, Jupyter Notebook support, tutorials, or guidance will not be provided in this course.

How to Get Help

If you have questions concerning the degree program, encounter a technical issue with Coursera, or issues using Slack, please submit a report to the ticketing system at umsimadshelp@umich.edu.

If you have an issue specific to the Coursera environment, you can also begin a [live chat session](#) with Coursera Technical Support (24/7) or [view Coursera troubleshooting guides](#). (you may be asked to log in to your Coursera account).

For questions regarding course content, refer to the **Communications Expectations** section below.

Accessibility

For those who choose to use Jupyter Notebooks, please see the [screen reader configuration for Jupyter Notebook Content](#).

Learning Outcomes

1. **Literacy:** Recognize and use data useful to reaching a decision.
2. **Competency:** Use effective public speaking strategies and design principles to present the results of a data science analysis to a targeted audience.
3. **Literacy:** Write a technical report to communicate hypotheses, methodologies, and findings from a data investigation in response to a particular question or need.
4. **Literacy:** Understand how to communicate effectively with data visualizations for a novice audience.

Course Schedule

This course begins on Tuesday November 21, 2023, and ends on Monday, December 18, 2023.

Assignments should be submitted by 11:59 pm on the date they are due:

Assignment 1: Nov 27, 2023

Assignment 2: Dec 4, 2023

Assignment 3: Dec 11, 2023

Assignment 4 & 5: Dec 18, 2023

Schedule of Weekly Office Hours:

- Group office hours in Zoom will be held Wednesdays at 7 pm EDT and Sundays at 11 am. Please access zoom links from learners → live events. These will be recorded and uploaded to Coursera.
- Private office hours are also available. Please contact your instructors directly to set up a time.

Grading

Course Assignment	Percentage of Final Grade
Problem Overview Slide (Week 1)	10%

Approach and Limitation Slides (Week 2)	10%
Technical Report (Week 3)	35%
Executive Summary (Week 4)	15%
Online Presentation (Week 4)	20%
Weekly Reading Quizzes	5%
Total	100%

Note: All assignments must be completed to earn credit for this course.

Letter Grades, Course Grades, and Late Submission Policy

Refer to the [MADS Assignment Submission and Grading Policies](#) section of the UMSI Student Handbook (access to Student Orientation course required).

Letter and Course Grades

A+ Rarely given and only at the discretion of the instructor.

A 94 +

A - 90 – 93

B+ 88 – 89

B 84 – 87

B - 80 – 83

C+	77 – 79
C	73 - 76
C -	70 – 72
D+	67 – 69
D	63 – 66
D -	60 – 62
E/F	below 59

Late Submissions

This course moves at a rapid pace. Because we use the same scenario throughout the four weeks, getting behind can snowball for you. To incentivize you to stay on track, there is a **15%** daily penalty (including weekends) for work submitted late. However, life moves at a rapid pace, too. If you have an extenuating circumstance that will preclude you from submitting work on time, or from completing the course, please email the course instructors using umsimadshelp@umich.edu. Please do what you can to plan ahead so we can all be as proactive as possible.

Accommodations

Refer to the [Accommodations for Students with Disabilities](#) section of the UMSI Student Handbook (access to the Student Orientation course required).

Use the [Student Intake Form](#) (requires U-M login) to begin the process of working with the University's Office of Services for Students with Disabilities.

Library Access

Refer to the [U-M Library's information sheet](#) on accessing library resources from off-campus. For more information regarding library support services, please refer to the [U-M Library Resources](#) section of the UMSI Student Handbook (access to the Student Orientation course required). Need research help? You may not know that U-M librarians can provide support for you and your research needs for this course. Find suggested resources on the [MADS research guide](#), or feel free to reach out to UMSI's librarian, Shevon Desai, at shevonad@umich.edu -- it's not an imposition. It's what she's there for!

Student Mental Health

Refer to the University's [Resources for Stress and Mental Health website](#) for a listing of resources for students.

Student Services

Refer to the [Introduction to UMSI Student Life](#) section of the UMSI Student Handbook (access to the Student Orientation course required).

Collaboration, Plagiarism, and Synthesis

UMSI is a professional school, and professionals converse with one another when making sense of concepts and ideas, as well as to get informal feedback. We know that MADS students come from a wide range of backgrounds and that use of others' work may be OK in some situations (like a course that encourages you to build on existing code libraries) and not in others (creating reports for this class). The course is designed to provide a wide variety of pathways and scenarios so as to minimize similarity between assignments. You must, however, create original work by yourself. Original work is not mere paraphrasing of someone else's completed answer or substituting words from existing text. Your work should have a strong sense of unique thinking; that is, it should transcend merely stringing together sentences and thoughts expressed by others, and your own synthesis should be evident in your work. Said differently, we are looking for your perspective and decision-making, supported by evidence you gather (and cite) from others. You may trace existing visualizations if you acknowledge the source graphic in your citations. All written submissions must be your own, original work.

Largely duplicate copies of the same assignment will receive an equal division of the total point score from the one piece of work. You may incorporate selected excerpts, statements or phrases from publications by other authors, and you should be referencing data from a variety of sources in your decision-making but they must be clearly marked as quotations (for text) and must be attributed (text, data, and images). If you build on the ideas of prior authors, you must cite their work.

You may obtain copyediting assistance, and you may discuss your ideas with others, but all substantive writing and ideas must be your own, or be explicitly attributed to another. Please cite your work using a recognizable citation format of your choice (e.g., MLA, APA, Chicago, Turabian, etc.). If you need assistance with this, both MLibrary and Sweetland Writing Center provide significant support -- or reach out and ask. We'd rather chat with you about your unique case than have you submit something you're not sure about.

Diversity

Diversity, equity, and inclusion matter at UMSI. Collaboration helps us develop interdependence and benefit from diverse perspectives and skills. For more information, please visit <https://www.si.umich.edu/about-umsi/diversity-equity-inclusion-school-information>. To help us

maximize fairness and avoid bias, we ask that you **not use your video camera when recording your Week 4 presentation.**

Guide to Being Not-Rich at U-M

There are many resources, services, and strategies that can help you thrive here on a budget. From work-study jobs to textbooks, study abroad to clothing needs, check out the student-crowdsourced “Being Not-Rich at U-M” guide [here](#).