

COMP SCI 765 section 001 Syllabus



Data Visualization

COURSE INFORMATION

Data Visualization

COMP SCI 765 001 (3 Credits)

2020 Fall (1212) [1212]

Description

Principles of the visual presentation of data. Survey of Information Visualization, Scientific Visualization, and Visual Analytics. Design and evaluation of visualizations and interactive exploration tools. Introduction to relevant foundations in visual design, human perception, and data analysis. Encodings, layout and interaction. Approaches to large data sets. Visualization of complex data types such as scalar fields, graphs, sets, texts, and multi-variate data. Use of 2D, 3D and motion in data presentations. Implementation issues. Enroll Info: None

Prerequisite(s)

Graduate/professional standing

Instruction Mode

Online Only

Section Level Com B

False

Department: Computer Sciences

College: Letters and Science

Canvas Course URL

<https://canvas.wisc.edu/>



2020 Fall (1212) [1212]

Term Start Date: Wednesday, 2-Sep-2020 **Term End Date:** Monday, 1-Feb-2021

Location and Schedule: ONLINE WF 11:00 AM-12:15 PM

CRN: 266024688

How the Credit Hours are Met

This class meets for (on average) two 75-minute class periods each week over the semester and carries the expectation that students will work on course learning activities (reading, writing, problem sets, studying, etc) for about 3 hours out of classroom for every class period. The syllabus and course web includes more information about meeting times and expectations for student work.



INSTRUCTORS AND TEACHING ASSISTANTS

Instructor



Michael GLEICHER

✉ GLEICHER@CS.WISC.EDU

Instructor Availability

Office hours will be conducted remotely. Occasional exceptions may be made following physical distancing and health recommendations at the discretion of your instructor/TA.

The instructor is available by appointment, and will hold regularly scheduled "drop in" times as well. See the course web or his home page for details.

TA Office Hours

Office hours will be conducted remotely. Occasional exceptions may be made following physical distancing and health recommendations at the discretion of your instructor/TA.

The TA is available by appointment and will hold occasional drop-in sessions that will be announced on Canvas, Piazza, or the Course Web.

GRADING AND COURSE MATERIALS

Course Website, Learning Management System and Instructional Tools

The course will use the university's learning management system, [Canvas](#), as its primary platform. Students are responsible for announcements and other materials posted there.

The course will provide a public web page at <https://graphics.cs.wisc.edu/Courses/765-f2020/> that will contain information relevant to class. Students are responsible for this content.










The course will use other online platforms for communication and assignments. See the course communication policy on the course web for details.



Understand what visualization is in the broad sense, with an emphasis on task and effectiveness.

S5756



-  Appreciate the potential for visualization, what it is good for (and not).
S5757
-  Perform design critique, especially for visualizations, but as a general skill.
S5758
-  Understand basic design process, and use it for visualization.
S5759
-  Appreciate visualization design in terms of its building blocks, and use this approach to design, redesign, and evaluate visualizations.
S5760
-  Understand common challenges encountered in creating visualizations, and have a sense of the existing strategies for addressing them.
S5761
-  Apply common design principles, and intuitions of how the pieces can be fit together, to design visualizations.
S5762
-  Appreciate the approaches to implementation, and select among the choices.
S5763
-  Appreciate how the ideas of visualization are used in practice.
S5764
-  Have a sense of what visualization research is.
S5765

Grading

Grading details are provided on the course web.

Grading will be based on the following class elements:

- Synchronous online class attendance and participation
- Design challenges (small projects)
- Online discussions
- Regular online assignments (discussions and seek-and-finds)
- In-class exercises
- Online quizzes and surveys

Final grades will be determined by combining the types of graded aspects. Most small assignments will be graded



coarsely, with consistent, timely completion being valued.

Class attendance is required. Acceptable completion of the majority of the small assignments is required to receive a good grade.

Discussion Sessions

There will be no separate discussion sections. Discussions will be held during class periods and online.

Required Textbook, Software, & Other Course Materials

All required reading materials will be provided online via the web, or through the Library's online services.

See the course webpage for a complete list.

The course webpage will provide links to required and optional resources.

EXAMS, QUIZZES, PAPERS & OTHER MAJOR GRADED WORK

Homework & Other Assignments

There will be weekly "Seek and Find" assignments that require students to find visualizations that show class concepts.

There will be weekly reading assignments.

There will be weekly online discussion assignments.

There will be regular online surveys.

There will be regular "in-class" design assignments that may have out-of-class components.

There will be other online assignments, such as peer review.

See the course web for details.

Exams, Quizzes, Papers & Other Major Graded Work

There will be no final exam for this class.

There will be "Design Challenges" (mini-projects) and a number of smaller assignments.

All assignments will be handed in via Canvas, except for in-class exercises.

Honorlock

[Honorlock](#) is the campus-supported proctoring tool. For [FAQ's](#) about Honorlock



Additional resources about Honorlock include:

- See suggested [syllabus language for use of Honorlock](#)
- For **Instructors:** [Honorlock Quick Guide](#) and UW-Madison's Knowledge Base [documentation](#)
- For **Students:** [Getting Started for Students](#)

Privacy of Student Information and Digital Proctoring Statement

The privacy and security of faculty, staff and students' personal information is a top priority for UW-Madison. The university carefully reviews and vets all campus-supported teaching and learning tools, including proctoring tools and takes necessary steps to ensure that tool providers prioritize proper handling of sensitive data in alignment with FERPA, industry standards and best practices.

Under the Family Educational Rights and Privacy Act (FERPA – which protects the privacy of student education records), student consent is not required for the university to share with Honorlock those student education records necessary for carrying out the proctoring service. 34 CFR 99.31(a)(1)(i)(B). FERPA specifically allows universities to treat vendors as school officials and to share student education records with them where they perform services for the university and are subject to FERPA requirements governing the use and redisclosure of personally identifiable information from education records. Honorlock is FERPA compliant and is bound by the terms of its agreement with the university to comply with FERPA's restrictions on the use of student education records.

Privacy of Student Records and the Usage of Audio Recorded Lectures

See information about [privacy of student records and the usage of audio-recorded lectures](#).

Usage of Audio Recorded Lectures Statement

Lecture materials and recordings for [insert class name] are protected intellectual property at UW- Madison. Students in this course may use the materials and recordings for their personal use related to participation in this class. Students may also take notes solely for their personal use. If a lecture is not already recorded, you are not authorized to record my lectures without my permission unless you are considered by the university to be a qualified student with a disability requiring accommodation. [Regent Policy Document 4-1] Students may not copy or have lecture materials and recordings outside of class, including posting on internet sites or selling to commercial entities. Students are also prohibited from providing or selling their personal notes to anyone else or being paid for taking notes by any person or commercial firm without the instructor's express written permission. Unauthorized use of these copyrighted lecture materials and recordings constitutes copyright infringement and may be addressed under the university's policies, UWS Chapters 14 and 17, governing student academic and non-academic misconduct

OTHER COURSE INFORMATION

Other Course Information

See the course web page for details of class policies.

ADDITIONAL COURSE INFORMATION AND ACADEMIC POLICIES





OTHER IN-PERSON INSTRUCTIONAL REQUIREMENTS

Practice physical distancing (staying at least six feet apart from others), in both indoor and outdoor spaces, including when entering and exiting building and instructional spaces.

- Monitor symptoms using the [COVID-19 Symptom Tracker](#) daily and, if symptoms exist, stay home and immediately get tested. Free testing is available to the entire campus community including students. Find more [information on testing](#) including on-campus testing locations, getting test results and what to do if you test positive for COVID-19.
- Follow specific guidance on classroom seating and furniture use. "Sit Here Signs" will be placed in classrooms to indicate where students should sit, as well as floor decals to indicate where furniture should be placed and remain.
- Limit the sharing of materials (papers, books, writing utensils, calculators, etc.) with others in class. Any materials brought to class must be taken with you when leaving the classroom.
- Food and beverages are not allowed in instructional spaces. For students who may need access to food or beverages during class (e.g., medical condition, other accommodation or circumstance) may do so while wearing face coverings. If this will be a reoccurring situation, students should discuss their on-going need with their instructor.
- Carefully observe and follow health and safety signs posted inside and outside the classroom.
- Course start and stop times are not staggered. At their discretion, instructors may start or end class a few minutes off schedule to avoid congestion in the halls.

Additionally, students should:

- Clean desks and seats before and after class with the provided classroom supplies and wipe off hands with disinfectant wipes. The provided cleaning supplies will be safe for skin contact; gloves are not needed. See [guidance for cleaning classrooms](#).
- Exit the classroom as quickly as possible to allow the next section to transition in safely
- Be aware of and sensitive to others around you, particularly those who may be struggling or having difficulties.



HOW TO SUCCEED IN THIS COURSE

Provide information on how students can best succeed in the course. For instance, instructors might include suggestions about completing assignments or studying for exams. Instructors might also include resource links to other campus services such as:

- [University Health Services](#)
- [Undergraduate Academic Advising and Career Services](#)
- [Office of the Registrar](#)
- [Office of Student Financial Aid](#)
- [Dean of Students Office](#)



STUDENTS' RULES, RIGHTS & RESPONSIBILITIES

During the global COVID-10 pandemic, we must prioritize our collective health and safety to keep ourselves, our campus, and our community safe. As a university community, we must work together to prevent the spread of the virus and to promote the collective health and welfare of our campus and surrounding community. [Rights & Responsibilities](#)





UW-MADISON BADGER PLEDGE

[Badger Pledge](#)



UW-MADISON FACE COVERING GUIDELINES

UW-Madison [face covering guidelines](#). While on campus all employees and students are required to [wear appropriate and properly fitting](#) face coverings while present in any campus building unless working alone in a laboratory or office space.

Face Coverings During In-person Instruction Statement (COVID-19)

Individuals are expected to wear a face covering while inside any university building. Face coverings must be [worn correctly](#) (i.e., covering both your mouth and nose) in the building if you are attending class in person. If any student is unable to wear a face-covering, an accommodation may be provided due to disability, medical condition, or other legitimate reason.

Students with disabilities or medical conditions who are unable to wear a face covering should contact the [McBurney Disability Resource Center](#) or their Access Consultant if they are already affiliated. Students requesting an accommodation unrelated to disability or medical condition, should contact the Dean of Students Office.

Students who choose not to wear a face covering may not attend in-person classes, unless they are approved for an accommodation or exemption. All other students not wearing a face covering will be asked to put one on or leave the classroom. Students who refuse to wear face coverings appropriately or adhere to other stated requirements will be reported to the [Office of Student Conduct and Community Standards](#) and will not be allowed to return to the classroom until they agree to comply with the face covering policy. An instructor may cancel or suspend a course in-person meeting if a person is in the classroom without an approved face covering in position over their nose and mouth and refuses to immediately comply.



QUARANTINE OR ISOLATION DUE TO COVID-19

Student should continually monitor themselves for COVID-19 [symptoms](#) and get [tested](#) for the virus if they have symptoms or have been in close contact with someone with COVID-19. Student should reach out to instructors as soon as possible if they become ill or need to isolate or quarantine, in order to make alternate plans for how to proceed with the course. Students are strongly encouraged to communicate with their instructor concerning their illness and the anticipated extent of their absence from the course (either in-person or remote). The instructor will work with the student to provide alternative ways to complete the course work.





COURSE EVALUATIONS

Indicate how students can evaluate the course. For example:

Students will be provided with an opportunity to evaluate this course and your learning experience. Student participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.

Digital Course Evaluation (AEFIS)

For instructors using the campus digital course evaluation survey tool, AEFIS.

UW-Madison now uses an online course evaluation survey tool, AEFIS. In most instances, you will receive an official email two weeks prior to the end of the semester when your course evaluation is available. You will receive a link to log into the course evaluation with your NetID where you can complete the evaluation and submit it, anonymously. Your participation is an integral component of this course, and your feedback is important to me. I strongly encourage you to participate in the course evaluation.



ACADEMIC CALENDAR & RELIGIOUS OBSERVANCES

• See: <https://secfac.wisc.edu/academic-calendar/#religious-observances>



ACADEMIC INTEGRITY STATEMENT

Instructors should discuss academic integrity with students early and often. For suggested ways to engage students in these discussions, see the College of Letters and Science [Remote Teaching Toolkit](#).

By virtue of enrollment, each student agrees to uphold the high academic standards of the University of Wisconsin-Madison; academic misconduct is behavior that negatively impacts the integrity of the institution. Cheating, fabrication, plagiarism, unauthorized collaboration, and helping others commit these previously listed acts are examples of misconduct which may result in disciplinary action. Examples of disciplinary action include, but is not limited to, failure on the assignment/course, written reprimand, disciplinary probation, suspension, or expulsion.





ACCOMMODATIONS FOR STUDENTS WITH DISABILITIES STATEMENT

The University of Wisconsin-Madison supports the right of all enrolled students to a full and equal educational opportunity. The Americans with Disabilities Act (ADA), Wisconsin State Statute (36.12), and UW-Madison policy (Faculty Document 1071) require that students with disabilities be reasonably accommodated in instruction and campus life. Reasonable accommodations for students with disabilities is a shared faculty and student responsibility. Students are expected to inform faculty [me] of their need for instructional accommodations by the end of the third week of the semester, or as soon as possible after a disability has been incurred or recognized. Faculty [I], will work either directly with the student [you] or in coordination with the McBurney Center to identify and provide reasonable instructional accommodations. Disability information, including instructional accommodations as part of a student's educational record, is confidential and protected under FERPA. (See: [McBurney Disability Resource Center](#))



DIVERSITY & INCLUSION STATEMENT

<https://diversity.wisc.edu/is> is a source of strength, creativity, and innovation for UW-Madison. We value the contributions of each person and respect the profound ways their identity, culture, background, experience, status, abilities, and opinion enrich the university community. We commit ourselves to the pursuit of excellence in teaching, research, outreach, and diversity as inextricably linked goals.

The University of Wisconsin-Madison fulfills its public mission by creating a welcoming and inclusive community for people from every background – people who as students, faculty, and staff serve Wisconsin and the world.

