

CSCI 444 – Data Visualization Syllabus

Instructor: Brent Donovan

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Office Hours: MF 1:00 – 2:00, W 11:00-11:50, by appointment.

Classroom Meetings:

Lecture	MW	9:00 – 9:50	S&E 209
Lab	F	9:00 – 9:50	Main 205

Course Description:

Covers the principles, methods, and techniques for effective visual analysis of data. Students will use both common and special software packages to explore different visualization applications. Students will learn how to formulate 3-D numerical models, translate 3-D models into graphical displays, and create time sequences and pseudo-animations. The course covers interactive versus presentation techniques and special techniques for video, DVD, and other media displays.

Prerequisites / Expectations:

A semester of programming – CSCI 112, CSCI 117, or CSCI 135.

Course Outcomes:

1. Produce high quality visuals involving scatter plots, time series, contours, histograms, relational data, geographically distributed data, multi-component datasets, simulation output, 3-dimensional datasets and animations.
2. Provide insights into how information is perceived, and how models of perception can be exploited to improve the quality of visualizations.
3. Develop skills for the statistical analysis of data.
4. Strengthen the students' programming and computer skills.
5. Deliver a theoretical background sufficient for students to understand whatever visualization packages they may encounter in the future.
6. Prepare the students for employment or graduate work in areas that employ visualizations to communicate information.

Textbook: No textbook purchase required.

Grading and Exams

Assignments	70%	A	90.0 - 100%
Final Exam	15%	B	80.0 – 89.9%
Final Project	15%	C	70.0 – 79.9%
		D	60.0 – 69.9%
		F	0 – 59.9%

(+/- grades will be used if within 2.5% of a cutoff.)

General:

Attendance: I don't use attendance in grading, but not attending will likely hurt your grade significantly.

Due Dates: When I do grading, I grade the same question / item across all students, rather than one assignment or exam at a time. This ensures me that I'm being consistent in scoring each item. It also implies that I need to have all student work present while I'm grading. Therefore, any homework turned in after I start grading will not be accepted. Homework turned in after the due date, but before I start grading will be docked 20%. If there are extenuating circumstances, please come talk to me before the due date.

Cheating: I don't expect that anyone will cheat. But this is the clause that clarifies it: cheating won't be tolerated. If there are any assignments that require collaboration, these will be identified on the assignment. Otherwise, you are expected to do your own work on assignments and on exams. Cell phones will not be allowed in exams. Calculators will be allowed, though probably not helpful.

Manners: Please leave your devices and private conversations turned off during class.

Communications: I will use katie.mtech.edu/classes/M144 and Moodle for posting assignments, grades, and communications. Please check your email everyday as there may be updates related to assignments and class meetings.

Disabilities: Any student who may need an accommodation due to a disability, please make an appointment to see me during my office hours within the first two weeks of class. A letter from a Montana Tech Disability Coordinator (496-4429) authorizing your accommodations is needed.