

# ITLS 4130 - Data Visualization | Course Syllabus

## Course Description

This course introduces data literacy required as a key twenty-first century skill. You will learn the nature of data across different domains and the concepts and skills of data visualization by understanding, questioning, and problematizing how data are generated, analyzed, and used. You will be able to apply its concepts and skills to visualize your own data, interpret the findings, and examine the impacts of data-driven decisions.

## Course Learning Outcomes

1. Gaining a basic understanding of the subject (e.g., factual knowledge, methods, principles, generalizations, theories)
2. Learning to analyze and critically evaluate ideas, arguments, and points of view.
3. Learning appropriate methods for collecting, analyzing, and interpreting numerical information
4. Developing specific skills, competencies, and points of view needed by professionals in the field most closely related to this course

## By the end of this course, you will be able to:

1. Understand the fundamental design principles and different types of data visualization.
2. Identify both positive and negative impacts of data-informed decisions across a variety of domains.
3. Apply the fundamental concepts of data visualization to define a project in your field of study.
4. Practice the core principles using widely available tools (e.g. Microsoft Excel).
5. Demonstrate the best practice that presents your story in the process of creating data visualization including connecting to different data sources, assessing the quality of the data, and converting raw data into data visualizations that provide actionable information.

## Required Materials

The following two books are required for the course. You can do online or paper copies.

- Effective Data Visualization: The Right Chart for the Right Data (2nd Edition) by Stephanie D. H. Evergreen (<https://us.sagepub.com/en-us/nam/effective-data-visualization/book265203>)
  - Please, please, please don't use the 1st edition. Dr. Evergreen added a lot of new stuff to the 2nd edition and you will be CONFUSED by the 1st edition, I promise (take it from me, a person who has tried)
- The Data Visualization Sketchbook (1st Edition) by Stephanie D. H. Evergreen (<https://us.sagepub.com/en-us/nam/the-data-visualization-sketchbook/book265204>).

## Course Schedule & Layout

This is an online, asynchronous course. Each week of the course will be assigned a specific module and students will be required to read, view, or listen to resources and complete related assignments. The type of assignments varies each week.

The module for each week will open Monday morning and, in general, assignments will be due Sunday night. For assignments with group interaction, the original post or submission will be due Thursday night and the secondary post or submission will be due Sunday night. Any variation from this provided outline will be explicitly communicated via the specific assignment's page in Canvas and may be supported via class-wide announcements. Please review the instructions for each assignment and class announcements carefully.

## Course Structure

Everything you need is housed in here in our Canvas course. I will be giving short overview lectures that will be posted within Canvas modules. I will also post podcasts, videos, and additional readings in the modules as well that can help you understand course concepts. This course will follow a weekly schedule comprised of three graded components: discussions, assignments, and quizzes. You'll have to do at least one of those components every week. Modules will open on Monday morning and **graded components will be due on Sundays at 11:59pm each week.**

The structure is subject to change at the discretion of the instructor to accommodate learning outcomes and class needs. Changes will be communicated via Canvas.

### Component 1: Discussion posts

For this component, you will engage graded discussions about the course content. These discussions might ask you to create something, read something and respond, and respond to your peers.

### Component 2: Assignments

During these weeks of the course, you will complete assignments that will help you build competencies and knowledge in data visualization.

### Component 3: Quizzes

During these weeks of the course, you will answer short answer and/or multiple choice quiz questions.

## LATE WORK POLICY & ITERATIVE SUBMISSION

A lot of the concepts in this course build on each other, so it works best for you and me if you get things done on time. However, stuff happens! You must communicate with me AT LEAST 24 hours prior to the component due date if you think you might need an extension. Extensions may not be possible for all components (e.g. group work; peer reviews). Late work is accepted at the discretion of the instructor. If late work is accepted, it is subject to a 5% downgrade for each day past the deadline UNLESS the student and instructor have decided on an extension.

**I follow a policy of iterative submission.** Say you submit an assignment and you just didn't do it quite right. Or you did it half right. I'll give you credit for that, but I will also allow you to resubmit so I can re-grade the assignment. I'm all about learning, not just submitting assignments for the sake of getting them done. If I grade your assignment and tell you can resubmit for a chance at earning additional points, you will have one week to submit a new iteration of the assignment for me to re-grade. There may be chances for additional rounds of revision at my discretion. The only time this won't happen is with the final project--you'll have a chance to get your work peer-reviewed before the final submission, though!

**If you need to discuss additional flexibility, please contact me ASAP. I cannot and will not be able to be flexible if you contact me at the end of the semester and ask me for accommodations on graded components that are incomplete and long overdue.**

# Communication Policy

I will respond to student emails within 24 hours during the week (Monday-Friday). I do not respond to emails/Canvas messages on weekends or holidays.

## Grade Scheme

The following grading standards will be used in this class:

| Grade | Range        |
|-------|--------------|
| A     | 93% to 100%  |
| A-    | 90% to < 93% |
| B+    | 87% to < 90% |
| B     | 83% to < 87% |
| B-    | 80% to < 83% |
| C+    | 77% to < 80% |
| C     | 73% to < 77% |
| C-    | 70% to < 73% |
| D+    | 67% to < 70% |
| D     | 60% to < 67% |
| F     | 0% to < 60%  |

Grading Scheme

## How We Create a Learning Environment

You and I are adults who will work together to co-create a learning environment that works for **you**. During the first two weeks of class, you will be asked to respond to a survey and discussion post about our online, asynchronous classroom environment. The survey will ask you about success/challenges of online learning, and a discussion post will ask you to brainstorm course norms. Throughout the course, I expect all students (and myself!) to strive to work together with these norms in mind.

# How I Can Help You Succeed

**Basic needs:** Any student who has difficulty affording groceries or accessing sufficient food to eat every day, or who lacks a safe and stable place to live and believes this may affect their performance in the course, is urged to contact the Dean of Students for support. Additionally, please notify me if you are comfortable in doing so. This will enable me to provide any resources that I can.

**Observation of Religious Holidays:** After reviewing the syllabus, please contact me if you foresee conflicts between the due dates for assignments and your religious observances.

## Canvas Information

Canvas is the where course content, grades, and communication will reside for this course.

- [usu.instructure.com](https://usu.instructure.com/) (<https://usu.instructure.com/>).
- For Canvas, Passwords, or any other computer-related technical support contact the [IT Service Desk](https://it.usu.edu/) (<https://it.usu.edu/>).
  - (435) 797-HELP(4357)
  - [Live Chat](https://mylivechat.com/chatnoscript.aspx?HCCID=48409868) (<https://mylivechat.com/chatnoscript.aspx?HCCID=48409868>).
  - [servicedesk@usu.edu](mailto:servicedesk@usu.edu) (<mailto:servicedesk@usu.edu>)

## Online Course Fee

\$15 per credit course fee is applied to all online courses to support digital technologies and support services required for engaging and effective online learning.