

# ITLS 4130 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 Objectives

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. Tableau).
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.

## Instructor

**Morgan Diederich**

**Messaging Preference:** Canvas Messenger

Email: morgan.diederich@usu.edu

**Office hours** by appointment

To schedule an appointment, feel free to send me a Canvas message, or schedule some time directly on my calendar with this link:

## Course Resources

Textbook: There is no required textbook for this course. All required readings and/or videos will be provided on the course site, Canvas.

Tools to Learn: Tableau offers a free one-year Tableau license to students.

Please download it here: <https://www.tableau.com/academic/students> If you would like to learn other advanced tools (e.g., R, Python, JavaScript), please discuss it with me by the end of Week 1.

## Course Requirements

Each student will:

1. Complete the assigned materials and assignments each week on time.
2. Create a final project demonstrating their knowledge on the topic.

## Evaluation Methods and Criteria

Evaluation will be completed by the instructor as outlined in each rubric for each given assignment. Students should carefully review the rubrics in order to understand what is expected.

## Grade Scheme

The following grading standards will be used in this class:

Grade	Range
A	100 % to 93.0%
A-	< 93.0 % to 90.0%
B+	< 90.0 % to 87.0%
B	< 87.0 % to 83.0%
B-	< 83.0 % to 80.0%
C+	< 80.0 % to 77.0%
C	< 77.0 % to 73.0%
C-	< 73.0 % to 70.0%
D+	< 70.0 % to 67.0%
D	< 67.0 % to 60.0%
F	< 59.0 % to 0.0%

## Course Schedule/Outline

Outline dates and assignments- See course summary. It is important to note that our weeks go from Wednesday - Wednesday at midnight. This is so I can answer questions during the weekday, but you still get a weekend to work on your materials.

Week	Topic	Assignment #1 (content checks, 60% of final points)	Assignment #2 (semester long project, 40% final points)
1	What is data? And why should I care about visualizing it?	Concept map   Meet with Morgan	Introduction Discussion Board. Expectations for class and previous experience.
2	Data visualization in the real world	Discussion post describing the data visualization selected   Meet with Morgan	Install Tableau or other data visualization
3	Working in Tableau- general introduction + refresh on data types and general chart exploration	Tableau Quiz (automatically scored)	Explore data set websites

4	Working with continuous data + data cleaning	Tableau Quiz (automatically scored)	Propose semester long project.
5	What makes a quality visualization? The art of storytelling with data	Discussion board	Receive feedback, based on last week's content
6	Working with categorical data	Tableau Quiz (automatically scored)	Send Morgan your final project plan
7	Critical Data Literacy. What should we be aware of as we look at data sets? Who is represented, who is not?	Reflection/ discussion board	[Morgan gives final project feedback]
8	Working with geospatial data	Tableau Quiz (automatically scored)	Data visualization #1
9	Feature engineering + advanced tableau topics	Tableau Quiz (automatically scored)	Feedback from peers, implementing this and previous weeks topics in feedback
10	Critiques for data visualization	Discussion Board	Data Visualization #2
11	Data ethics	Discussion Board	Feedback from peers, implementing this and last week's topics in feedback
12	Going beyond the powerpoint and dashboard. Data driving impact, alternative ways to display data visualizations	Discussion Board	Final Project Draft
13	Work on final project	n/a	Feedback from peers + Morgan
14	Thanksgiving	n/a	n/a
15	Final Project	n/a	Final project due

## Late Work, Attendance, and Excused Absences Policy

As an online class, there is no attendance. However, students are required to participate in weekly activities by deadlines set each week.

All work is due based on the specified due-dates except in emergency situations (family emergency, illness, or participation in a university sponsored activity). A late assignment without an excuse will lead to a zero grade on the assignment. Prior to the assignment due date, you should email a written excuse to your instructor to be considered excused. This policy is in effect as an incentive to stay current with the assigned work. Like many courses, the work of one session is based on understanding the work of the previous sessions. Falling behind in the work greatly reduces the chances of success at attempting later work. For 5 extra easter egg points, send Morgan a Canvas message with the subject line "I understand that the weeks run from Wednesday to Wednesday, and that late assignments without an approved excuse will lead to a 0 on the assignment." The body of the message should then say "Morgan understands that life does happen, so I should know to reach out as soon as possible so she can help make arrangements if I think I am unable to turn my assignment in on time. This does not guarantee approval for turning in late work for credit."

## Library Services

All USU students attending classes in Logan, at our Regional Campuses, or online can access all databases, e-journals, and e-books regardless of location. Additionally, the library will mail printed books to students, at no charge to them. Students can also borrow books from any Utah academic library. Take advantage of all library services and learn more at [libguides.usu.edu/rc](http://libguides.usu.edu/rc). [Links to an external site.](#)

## Classroom Civility

Utah State University supports the principle of freedom of expression for both faculty and students. The University respects the rights of faculty to teach and students to learn. Maintenance of these rights requires classroom conditions that do not impede the learning process. Disruptive classroom behavior will not be tolerated. An individual engaging in such behavior may be subject to disciplinary action. Read [Student Code Article V Section V-3](#) [Links to an external site.](#) for more information.

## University Policies & Procedures

### Academic Freedom and Professional Responsibilities

Academic freedom is the right to teach, study, discuss, investigate, discover, create, and publish freely. Academic freedom protects the rights of faculty members in teaching and of students in learning. Freedom in research is fundamental to the advancement of truth. Faculty members are entitled to full freedom in teaching, research, and creative activities, subject to the limitations imposed by professional responsibility. [Faculty Code Policy #403](#) [Links to an external site.](#) further defines academic freedom and professional responsibilities.

### Academic Integrity – "The Honor System"

Each student has the right and duty to pursue his or her academic experience free of dishonesty. To enhance the learning environment at Utah State University and to develop student academic integrity, each student agrees to the following Honor Pledge: *"I pledge, on my honor, to conduct myself with the foremost level of academic integrity."* A student who lives by the Honor Pledge is a student who does more than not cheat, falsify, or plagiarize. A student who lives by the Honor Pledge:

- Espouses academic integrity as an underlying and essential principle of the Utah State University community;
- Understands that each act of academic dishonesty devalues every degree that is awarded by this institution; and
- Is a welcomed and valued member of Utah State University.

## **Academic Dishonesty**

The instructor of this course will take appropriate actions in response to Academic Dishonesty, as defined the University's Student Code. Acts of academic dishonesty include but are not limited to:

- **Cheating:** using, attempting to use, or providing others with any unauthorized assistance in taking quizzes, tests, examinations, or in any other academic exercise or activity. Unauthorized assistance includes:
  - Working in a group when the instructor has designated that the quiz, test, examination, or any other academic exercise or activity be done "individually;"
  - Depending on the aid of sources beyond those authorized by the instructor in writing papers, preparing reports, solving problems, or carrying out other assignments;
  - Substituting for another student, or permitting another student to substitute for oneself, in taking an examination or preparing academic work;
  - Acquiring tests or other academic material belonging to a faculty member, staff member, or another student without express permission;
  - Continuing to write after time has been called on a quiz, test, examination, or any other academic exercise or activity;
  - Submitting substantially the same work for credit in more than one class, except with prior approval of the instructor; or engaging in any form of research fraud.
- **Falsification:** altering or fabricating any information or citation in an academic exercise or activity.
- **Plagiarism:** representing, by paraphrase or direct quotation, the published or unpublished work of another person as one's own in any academic exercise or activity without full and clear acknowledgment. It also includes using

materials prepared by another person or by an agency engaged in the sale of term papers or other academic materials.

For additional information go to: [ARTICLE VI. University Regulations Regarding Academic Integrity](#)[Links to an external site.](#)

## **Discrimination and Sexual Misconduct**

### **General Overview**

USU strives to provide an environment for students and employees that is free from [discrimination](#)[Links to an external site.](#) and [sexual misconduct](#)[Links to an external site.](#). If you experience sexual misconduct or discrimination at any point during the semester inside or outside of class, you are encouraged to contact the [USU Title IX Coordinator](#)[Links to an external site.](#) via Old Main room 161 in Logan, 435-797-1266, [titleix@usu.edu](mailto:titleix@usu.edu), or at [equity.usu.edu/report](http://equity.usu.edu/report)[Links to an external site.](#). You can learn more about the USU resources available for individuals who have experienced sexual misconduct at [sexualrespect.usu.edu](http://sexualrespect.usu.edu)[Links to an external site.](#). Resources for individuals who have experienced discrimination are listed at [equity.usu.edu/resources](http://equity.usu.edu/resources)[Links to an external site.](#).

### **Required Reporting of Sexual Misconduct**

The instructor is designated by USU as a "[reporting employee](#)[Links to an external site.](#)." This means that if you share information about [sexual misconduct](#)[Links to an external site.](#) (sexual harassment, sexual assault, relationship violence, or sex-based stalking) with the instructor, they *will report* that information to the [USU Title IX Coordinator](#)[Links to an external site.](#). The instructor is also required to tell you about [designated confidential resources](#)[Links to an external site.](#), [supportive measures](#)[Links to an external site.](#), and [how you can file a report](#)[Links to an external site.](#) with the USU Title IX Coordinator.

## **Withdrawal Policy and "I" Grade Policy**

Students are required to complete all courses for which they are registered by the end of the semester. In some cases, a student may be unable to complete all of the coursework because of extenuating circumstances, but not due to poor performance or to retain financial aid. The term 'extenuating' circumstances includes: (1) incapacitating illness which prevents a student from attending classes for a minimum period of two weeks, (2) a death in the immediate family, (3) financial responsibilities requiring a student to alter a work schedule to secure employment, (4) change in work schedule as required by an employer, or (5) other emergencies deemed appropriate by the instructor.

## **Students with Disabilities**

USU welcomes students with disabilities. If you have, or suspect you may have, a physical, mental health, or learning disability that may require accommodations in this course, please contact the [Disability Resource Center \(DRC\)](#) [Links to an external site.](#) as early in the semester as possible (University Inn # 101, (435) 797-

2444, [drc@usu.edu](mailto:drc@usu.edu)). All disability related accommodations must be approved by the DRC. Once approved, the DRC will coordinate with faculty to provide accommodations.

Students who are at a higher risk for complications from COVID-19 or who contract COVID-19 may also be eligible for accommodations.

## Respect for Diversity

Regardless of intent, careless or ill-informed remarks can be offensive and hurtful to others and detract from the learning climate. If you feel uncomfortable in a classroom due to offensive language or actions by an instructor or student(s) regarding ethnicity, gender, or sexual orientation, contact:

- Division of Student Affairs: <https://studentaffairs.usu.edu> [Links to an external site.](#), (435) 797-1712, [studentservices@usu.edu](mailto:studentservices@usu.edu), TSC 220
- Student Legal Services: <https://ususa.usu.edu/student-association/student-advocacy/legal-services> [Links to an external site.](#), (435) 797-2912, TSC 326,
- Access and Diversity: <http://accesscenter.usu.edu> [Links to an external site.](#), (435) 797-1728, [access@usu.edu](mailto:access@usu.edu); TSC 315
- Multicultural Programs: <http://accesscenter.usu.edu/multiculture> [Links to an external site.](#), (435) 797-1728, TSC 315
- LGBTQA Programs: <http://accesscenter.usu.edu/lgbtqa> [Links to an external site.](#), (435) 797-1728, TSC 3145
- Provost's Office Diversity Resources: <https://www.usu.edu/provost/diversity> [Links to an external site.](#), (435) 797-8176

You can learn about your student rights by visiting:

The Code of Policies and Procedures for Students at Utah State University: <https://studentconduct.usu.edu/studentcode> [Links to an external site.](#)

## Grievance Process

Students who feel they have been unfairly treated may file a grievance through the channels and procedures described in the Student Code: [Article VIII](#) [Links to an external site.](#)

**Full details for USU Academic Policies and Procedures can be found at:**

- [Student Conduct](#) [Links to an external site.](#)
- [Student Code](#) [Links to an external site.](#)
- [Academic Integrity](#) [Links to an external site.](#)
- [USU Academic Policies and Procedures](#) [Links to an external site.](#)
- [Academic Freedom and Professional Responsibility Policy](#) [Links to an external site.](#)

## Emergency Procedures

In the case of a drill or real emergency, classes will be notified to evacuate the building by the sound of the fire/emergency alarm system or by a building representative. In the event of a disaster that may interfere with either notification, evacuate as the situation dictates (i.e., in an earthquake when shaking ceases or immediately when a fire is



discovered). Turn off computers and take any personal items with you. Elevators should not be used; instead, use the closest stairs.

## **General Health Protocols**

The cold, flu, COVID-19, and other illnesses can have an impact on the health of our university community. USU welcomes the wearing of masks in all university buildings and encourages taking measures to mitigate risk as recommended by federal and state public health officials: getting vaccinated, staying home if you are sick (even with mild symptoms), and frequent hand washing.

## **Mental Health**

Mental health is critically important for the success of USU students. As a student, you may experience a range of issues that can cause barriers to learning, such as strained relationships, increased anxiety, alcohol/drug problems, feeling down, difficulty concentrating and/or lack of motivation. These mental health concerns or stressful events may lead to diminished academic performance or reduce your ability to participate in daily activities. Utah State University provides free services for students to assist them with addressing these and other concerns. You can learn more about the broad range of confidential mental health services available on campus at [Counseling and Psychological Services \(CAPS\)Links to an external site.](#)

Students are also encouraged to download the [“SafeUT App”Links to an external site.](#) to their smartphones. The SafeUT application is a 24/7 statewide crisis text and tip service that provides real-time crisis intervention to students through texting and a confidential tip program that can help anyone with emotional crises, bullying, relationship problems, mental health, or suicide related issues.