Course Syllabus
ADES 5450 | Data Visualization + Information Design
Michael R. Gibson, Instructor of Record
michael.gibson@unt.edu

This course meets on Wednesdays from 6:30 to 9:20 pm in room 121 at UNT’s New College in Frisco.

Course Description
This course emphasizes the exploration of how data-cum-information can be organized and visualized to enhance a particular audience’s ability to a. comparatively and contextually interpret meaning and b. (perhaps) think differently and (perhaps) act based on this interpretation. More specifically, students will learn to design visually communicative depictions of sequential and time-based data that helps audiences make effective comparisons between and derive contextualized understandings from key concepts and patterns at work within given data sets.

To achieve these goals, students will be immersed in learning situations wherein they will learn to utilize user-centric, conceptual and method-based approaches to develop the effective formal and functional realization of information delivery systems.* Over the course of the semester, students will complete four to five assigned projects and—time permitting—an individually guided research project using a variety of design tools and media that span a gamut from static, pencil-and-paper models, to video, animation, three-dimensional/sculptural realizations and the interactive web.**

Prerequisites
(for MA in Des w/ Concentration in IXD students): Admittance into the MA in Design with a concentration in IXD program; (for students from Com Sci, Tech Comm, Anthropology, Journalism, Marketing and Logistics, Sociology, ITDS, Department of Design and working professionals from outside UNT’s graduate programs students): permission of the instructor.

Required Texts

Materials
In addition to weekly readings from your course textbooks, other reading material will be posted as PDFs or MS Word documents in the Readings folder on the Blackboard-facilitated course website. You should bring a sketchbook (roughly 9” x 12” in size), and a dark pen(s), pencil(s), or other sketching tool(s) you’re comfortable using (e.g., an iPad or other form of digitechnically enhanced rendering tablet). You may also find that you need to make use of photographs or video sequences you have shot, as well as graphics applications software such as Adobe InDesign, Illustrator and/or Photoshop (of these three, Adobe Illustrator will likely prove most useful to you). As a UNT student, you have free access to online-facilitated tutorials re: all of these softwares via Lynda.com tutorials.

Course Objectives
Through the completion of course assignments, students will acquire competency in the following areas:

· The ability to effectively analyze common data domains—text, cartography, networks, multivariate data—to discern essential patterns and relationships that could guide the development of particular data visualizations;

· The ability to these interpretations of pat-
terns and relationships from particular data domains to guide the development of data visualizations that function as analytical tools on behalf of given audiences;

- Practical experience using iteratively structured design processes to create effective data visualizations from initial idea generation and rough-sketching to final realization as interactive entities;
- Practical experience using visual narrative/visual storytelling principles and techniques to guide the design of effectively communicative data visualizations.

Through the completion of course assignments, students will develop competency in the following areas:

- Develop the capacities and competencies necessary to engage in visualization as both a means to a) explore relationships and patterns contained within data and as b) a means to explain these to a specific audience;
- Understandings of how to iteratively structure, represent and communicate information across different media platforms in ways that allow periodic assessment by sample, persona-based users to affect design development;
- Classifying information gleaned from data according to the following six structural rubrics: Hierarchical, Relational, Temporal, Spatial, Spatio-Temporal, and Textural;
- The ability to iteratively design representative data sets that lack inherent spatial components in physical forms such as statistical charts, graphs, maps and diagrams;
- The ability to iteratively design informational graphics in ways that combine various statistical expressions and visualizations with some form of narrative (including those are normative or polemic in nature).

Course Structure

This course is offered in a design studiolab format, and will meet for one, 170-minute class session per week. Course content and studiolab etiquette during critically dialectic exchanges between fellow students and students and faculty are all consistent with the requirements of pursuing a career in professional User Experience and Interaction Design environments.

Students will likely have to work four to six hours per week outside of class to complete their assigned coursework. Students may work in the studiolab as required, and must participate in class discussions and critical dialogues during class hours. Students will submit their work on assigned course projects in iterative phases as stipulated by a per-project development schedule. The CVAD Computer Lab, the computing facilities in room 315 of Curry Hall and the Design Research Collaborative in Dallas, are available to students to work on assigned course projects outside of scheduled class time.

The CVAD Computer Lab, the computing facilities in room 121 of the New College, and the Design Research Collaborative in Dallas are available (during their respective hours of operation and if they are not otherwise in use or are under use restrictions as mandated by CVAD or New College in Frisco IT personnel) to students to work on assigned course projects outside of scheduled class time.

Evaluation/Grading

Each assigned and independent project will be worth a specific number of total course points to individual students or students working in design teams. Each assigned project will be evaluated according to criteria articulated to all students on the day it is launched. How effectively each student or student team is assessed to have addressed specific project criteria will be recorded on an assessment document that each student will receive one to three weeks after the culmination of each
The per-project course points (see below) each student earns as the semester progresses will be added together at the end of the semester to determine that student’s final course grade. There is no final exam for this course.

**Articulation of per-project course points:**

01 | Assessment of two information visualizations from the “Places and Spaces: Mapping Science” exhibit website:
   10 points (08.30.17—09.13.17)

02 | Autobiographically driven data visualization:
   15 points (09.13.17—10.04.17)

03 | Using visualized data to chronicle change over time:
   15 points (10.04.17—10.25.17)

04 | Mapping the future of UNT Denton’s library system:
   20 points (10.25.17—11.22.17)

05 | Using the visualization of information to address a S.T.E.E.P.° issue of personal concern/individual interest:
   20 points (11.22.17—12.13.17)

The remainder of each student’s grade (20 course points) will be calculated according to the following criteria:

- daily class participation + in-class + group work

Please note: as 1) our class size is relatively small, and 2) Blackboard’s facilitation of its “Assignments” feature leaves much to be desired re: usability by all its target users, please send me your homework assignments either as e-mail attachments or place them in a to-be-determine online repository. To avail yourself of the “e-mail option,” send me your documents in whatever format I call for (per assignment, likely in .pdf form or as MS Word documents), AND—please use the following language in your subject line: “ADES 5450-Your-LastName-assignment title.”

**Attendance Policy**

Attendance is mandatory. The instructor will take roll at the beginning of each class session. Every unexcused absence over two will result in a letter grade reduction of the final course grade beginning with the third unexcused absence. Each two instances of tardiness over an initial two of these will be counted as one absence. A student is tardy if he/she arrives after the first 15 minutes of class have elapsed. No make-up opportunities for a missed class session will be given to any student enrolled in this course unless that student presents the professor with a UNT-Approved Absence Verification form within 72 hours of the ending of the class session that was missed. Students are hereby notified that meeting with the Instructor of Record for this course during an office hours session does NOT make up/cannot be substituted for a class session that was missed.

**Course Risk Factor**

This class has been assigned a Level 1 Risk Rating, a course in which students are exposed to some minor hazards (most particularly, repeated computer usage), but are not likely to suffer bodily harm.

**American Disabilities Act**

The College of Visual Arts and Design is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment, and in order to facilitate equality of educational access, faculty members in the College will execute reasonable accommodations for qualified students with a disability, such as making appropriate adjustments to the classroom environment, as well as to the teaching, testing, or learning methodologies that are operated within the structure of the...
course, as long as actuating any of theseadjustments does not fundamentally alter the content that must be delivered within the structure of the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Disability Accommodation (ODA; https://disability.unt.edu/), and to inform the instructor of your need for an accommodation. It is preferred that requests for accommodation be given to the instructor no later than 5 pm CDT on the final day of the first week of classes for students registered with the ODA as of the beginning of the current semester. If you register with the ODA after the first week of classes, your accommodation requests will be considered after this deadline. Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNT Policy 18.1.14, at https://disability.unt.edu/, and by visiting the ODA in Sage Hall on the UNT Denton campus, room 167 (visit the UNT website for updated location information). You also may call the ODA at 940.565.4323.

Building Emergency Procedures
In case of emergency, an alarm will sound. If this occurs, please follow the building evacuation plans posted on each floor of your building and proceed to the nearest parking lot. In case of a tornado (campus sirens will sound), or other weather-related threat, please go to the nearest hallway or room on your floor without exterior windows and remain there until an all clear signal is sounded. Follow the instructions of your instructors and act accordingly.

Student Rights and Responsibilities
Each University of North Texas student is entitled to certain rights associated with higher education institutions. See www.unt.edu/csrr for further information.

Faculty Evaluation
The Student Evaluation of Teaching Effectiveness (SETE) is a requirement for all organized courses at UNT. This short survey will be made available to you at the end of the semester so that you can offer constructive criticism regarding how this class is taught. I consider the SETE to be an important part of your participation in this course, as I utilize the feedback I get from it to improve my teaching. You will be notified of the dates for the Spring administration of the SETE by the University.

Concerning Plagiarism
Plagiarism is a serious violation of UNT’s code of academic conduct. The UNT Code of Student Conduct and Discipline, Policy Manual, Graduate Catalog, and Undergraduate Catalog explain specific policies, penalties, and the appeals process. The UNT Policy on Academic Misconduct provides definitions of plagiarism and states that the instructor can assign penalties for violations of the policy.

The Graduate Catalog states:
“The term plagiarism includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. Plagiarism also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials.”

The UNT policy further states that all students: “…are responsible for making themselves aware of the definitions and implications of academic misconduct. For further information on academic misconduct, penalties and appeal procedures, the student should refer to the “Code of Student Conduct and Discipline.”

Penalties are assigned by instructors and can range from reducing the grade for a test or
It is the policy of this instructor re: the operation of this course that individual cases of plagiarism—once proved—will result in automatic course failure and a recommendation for removal or expulsion from any and all other courses in the MA in Design with concentration in Interaction Design curriculum at UNT.

**Plagiarism described more specifically**

Plagiarism is copying: retyping, cutting and pasting, or paraphrasing. All students in this course are warned as follows:

- Do not quote or paraphrase published sources, including assigned readings and Web-based sources, without explicit reference to the original work. Credit the source using guidelines provided in the 16th edition of the Chicago Manual of Style.
- Do not insert parts of class lectures, online modules, or tutorials, including examples, into your own work. These are published by the instructors, who properly cite the sources of any external published sources.
- Do not insert parts of previous students’ work into your own work.
- Do not insert parts of current students’ work into your own work without his or her express permission to do this. If the current student is your project draft exchange partner, that student trusts you to respect his/her intellectual product.

You are expected to study and learn from the materials provided, then to use your own words in your assignments, or clearly credit sources using the guidelines provided in the 16th edition of the Chicago Manual of Style.

**Disclaimer**

The instructor retains the right to change the course syllabus and schedule without notice.

---

The University of North Texas
College of Visual Arts and Design
Department of Design