



INFS797 APPLICATIONS OF VISUALIZATION

Winter 2024

11/07/2024 - 02/11/2025

Online

Asynchronous (Assigned Readings and Videos) with
Optional Synchronous Touchpoint

(Thursdays 6:00 - 7:00 PM, Zoom Sessions at <https://luc.zoom.us/j/89093835662>)



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Virtual Office Hours:

Via Zoom on Thursdays or by request.

COURSE INFORMATION

Course Description: This course will develop a vocabulary and framework for discussing, critiquing, and designing visual displays of quantitative data. This entails awareness of human perception and cognition and the use of best practices in visualization of quantitative data, dashboard design and storytelling with data.

Course Overview This course includes lectures, homework assignments, quizzes, and a project.

Course Objectives and Learning Outcomes Upon completion of this course you should be able to:

- Recognize the value and role of data visualization in decision making.
- Demonstrate the knowledge of human perception in design.
- Deploy visualization best practices in displaying information for Quantitative Analysis and Dashboards
- Demonstrate best practices in communicating and storytelling with data.
- Perform analysis using best-in-class visual analysis tool.

Textbooks/Materials:

- Stephen Few: Now you see it (Analytics Press), **2nd Edition**.
<https://a.co/d/gnQw62W>
- Stephen Few: Information Dashboard Design: Displaying Data for At-a-Glance Monitoring **2nd Edition** (Analytics Press),
(<https://www.amazon.com/gp/product/1938377001/>)
- Cole Nussbaumer Knaflic: Storytelling with Data: A Data Visualization Guide for Business Professionals (Wiley),
(<https://www.amazon.com/gp/product/1119002257/>)
- Other (free) materials (will be provided on Sakai)
- Tableau Software (free student license will be provided on Sakai)



Class Format: This class will be delivered on-line combining asynchronous and synchronous (optional) formats. The **optional** touch point will be conducted in real time via Zoom on **Thursdays** (6:00-7:00 PM Central).

COURSE REQUIREMENTS AND GRADING CRITERIA:

Check-your-knowledge	50 pts
Labs	50 pts
Quizzes (6)	420 pts
HW Assignments (5)	300 pts
<u>Final Projects</u>	<u>180 pts</u>
Total	1000 pts

Course Grading Scale			
A	Min 92%	C+	Min 78%
A-	Min 90%	C	Min 72%
B+	Min 88%	C-	Min 68%
B	Min 82%	D+	Min 66%
B-	Min 80%	D	Min 60%
		F	<60 %

Check-your-knowledge (CYK): After each mini-lecture (reading), there will be a brief 2-3 question mini-quiz to provide you with instant feedback. Though you are strongly encouraged to complete them while reviewing video lectures and readings, CYK mini-assessments for each week are due before midnight on the due date (via Sakai).

Tableau Labs: In most modules, you will have a chance to follow my Tableau instructional videos showing you how to implement the theory in practice. Just follow along in your copy of Tableau and submit your work via Sakai. Lab(s) for each week are due before midnight on the due date. View these labs as my attempt to introduce you to Tableau, make your HW easier to complete, and to reinforce the theory.

Module Quizzes: Each quiz is worth 70 points. There are six class quizzes. All quizzes will be administrated via Sakai. Each quiz will be based on the topics from a chapter in the textbook, lectures, slides, and other course material. Quizzes are due before midnight on the due date.

HW Assignments: Each HW assignment is worth 60 points. There are five HW assignments. HW assignments are due before midnight on the due date. All HW assignments must be submitted via Sakai.

Final Project: One group final project.

TECHNOLOGY INFORMATION:

Sakai - You will use Sakai to access instructional materials, submit assignments, and participate in weekly discussions. For step-by-step instructions on using Sakai visit the [Sakai Student Guide](#). You can access the Sakai Student Guide by selecting **Help** from the tool menu in any Sakai site. For additional Sakai assistance, contact the Help Desk at helpdesk@luc.edu or 773-508-4487.

Zoom - Zoom is a web-conferencing solution. We will use Zoom for office hours. To join office hours, you will need to download and install Zoom on the computer you plan to use for online meetings. View [How do I download Zoom?](#) for additional instructions. A camera and microphone are recommended to fully participate in the online meetings. Many laptops will already have a microphone and camera built in. If you would like to purchase a microphone or camera, view [Purchasing Equipment](#) for recommendations. If you would like to test Zoom, view [How do I test prior to joining a meeting?](#) View [How do I join a Zoom meeting from Sakai?](#) for more information. For additional Zoom assistance, you can contact 24/7 Zoom support: [How do I contact Zoom support?](#) You can also contact the Loyola Help Desk at helpdesk@luc.edu or 773-508-4487.

Tableau - You will have a chance to work with Tableau, a leading Data Visualization platform. Free access will be provided. Additional information will be provided on Sakai

ADDITIONAL NOTES:

Check your grades often in the grade book on Sakai. Virtual office hours' visits are encouraged and welcomed. Feel free to send me an email if you have any questions

QUINLAN SCHOOL OF BUSINESS POLICIES

Attendance: Class attendance and participation are fundamental components of learning, so punctual attendance at all classes, for the full class meeting period, is expected of Quinlan students.

Class Recording – Syllabus Statement: In this class software will be used to record live class discussions. As a student in this class, your participation in live class discussions will be recorded. These recordings will be made available only to students enrolled in the class, to assist those who cannot attend the live session or to serve as a resource for those who would like to review content that was presented. All recordings will become unavailable to students in the class when the Sakai course is unpublished (i.e. shortly after the course ends, per the [Sakai administrative schedule](#)). Students who prefer to participate via audio only will be allowed to disable their video camera so only audio will be captured. Please discuss this option with your instructor.

University Privacy Statement: Assuring privacy among faculty and students engaged in online and face-to-face instructional activities helps promote open and robust conversations and mitigates concerns that comments made within the context of the class will be shared beyond the classroom. As such, recordings of instructional activities occurring in online or face-to-face classes may be used solely for internal class purposes by the faculty member and students registered for the course, and only during the period in which the course is offered. Students will be informed of such recordings by a statement in the syllabus for the course in which they will be recorded. Instructors who wish to make subsequent use of recordings that include student activity may do so only with informed written consent of the students involved or if all student activity is removed from the recording. Recordings including student activity that have been initiated by the instructor may be retained by the instructor only for individual use.

Make-Up Examinations: Loyola University academic policy provides that tests or examinations may be given during the semester or summer sessions as often as deemed advisable by the instructor. Because Quinlan faculty believe examinations represent a critical component of student learning, required examinations should be taken during the regularly scheduled class period. **Make-up examinations are discouraged.** Exceptions may be granted only by the faculty member or department chair, and only for unavoidable circumstances (illness verified by a signed physician's note, participation in intercollegiate athletic events, subpoenas, jury duty, military service, bereavement, or religious observance). A make-up final examination may be scheduled only with the permission of the appropriate Quinlan Assistant or Associate Dean. For a student with a documented special testing need, please consult University policy concerning use of the testing center in Sullivan Center at Lake Shore Campus.

Academic Integrity: All members of the Quinlan School shall refrain from academic dishonesty and misconduct in all forms, including plagiarism, cheating, misrepresentation, fabrication, and falsehood. For further information about expectations for academic integrity and sanctions for violations, consult the complete Quinlan School of Business Honor Code and Statement of Academic Integrity on the Quinlan website: <http://luc.edu/media/lucedu/quinlan-graduate/pdfs/Honor-Code-Quinlan-July2012.pdf>

Notes: This class may occasionally deviate from the stated course outline below. The instructor reserves the right to make changes as needed to the course syllabus. Any issue that is not described in this syllabus will be resolved at the sole discretion of the instructor.

MODULE AND WEEK COURSE OUTLINE (TENTATIVE¹)

Module	Dates	Topic	Due
Module 1	Nov 07 – Nov 08	Welcome & Introduction to Information Visualization	
	Nov 09 – Nov 15	Introduction to Information Visualization (cont.)	Q1, HW1 , All M1 activities – Due Friday, Nov 15 th EOD
Module 2	Nov 16 – Nov 22	Visual Perception and Cognition	
	Nov 23 – Nov 26	Visual Perception and Cognition (cont)	Q1, HW1 , All M1 activities – Due Tuesday, Nov 26 th EOD
	Nov 27 – Nov 30	Thanksgiving Break	
Module 3	Dec 1 – Dec 6	Visual Interaction, Navigation, Techniques	
	Dec 7 – Dec 13	Visual Interaction, Navigation, Techniques (cont.)	Q3, HW 3 , All M3 activities – Due Friday, Dec 13 th EOD
	Dec 15 – Jan 07	Winter Break	
Module 4	Jan 8 – Jan 16	Visual Techniques for Quant Analysis	Q4, HW4 , All M4 activities – Due Friday, Jan 16 th EOD
Module 5	Jan 17 – Jan 23	Designing Dashboards	Q5, HW5 , All M5 activities – Due Friday, Jan 23 rd EOD
Module 6	Jan 24 – Jan 30	Storytelling with data	Q6 , All M6 activities – Due Friday, Jan 30 th EOD
Module 7	Jan 31 – Feb 6	Putting it all together	Final Project Due 2/11
	Feb 7 – Feb 11	Work on the final project	

¹ Schedule is tentative. I reserve the right to modify schedule dates, scope, materials and assignments due throughout the course to more effectively meet course objectives. Check Sakai for relevant announcements and modifications.