THE UNIVERSITY OF AUCKLAND
Te Whare Wānanga o Tāmaki Makaurau
NEW ZEALAND

BUSINESS SCHOOL

Course Outline2017
INFOMGMT 392: DATA VISUALISATION (15 POINTS)

Semester 2 (1175)

Course Prescription
Graphs, maps, charts, animations and tag clouds assist us to better understand data. Accountants, economists, management and marketing specialists all seek sophisticated visual representations to better communicate with their clients. This course involves structuring interactive and animated graphical interfaces using computing applications to acquire, analyse and transform data into a usable form. Students will design, prototype, build, or adapt digital tools to provide an engaging visual representation of information.

Programme and Course Advice
Prerequisite: 30 points at Stage II in Information Management or Information Systems, or permission of the lecturer.

Goals of the Course
The successful student will be able to demonstrate practical skills, and theoretical knowledge, that will enable them to communicate the significant implications of their data analyses within a business environment.

Learning Outcomes
By the end of this course it is expected that the student will be able to:

1. create a data visualisation, from a provided dataset, that delivers a compelling narrative to a specified audience;
2. create the most commonly used business visualisations in a data visualisation tool;
3. evaluate, critique, and suggest improvements to, visual representations of data;
4. recognise unethical uses of data visualisations
5. design and deliver effective presentations that satisfy a client's requirements;
6. demonstrate effective, engaging presentations in person to a live audience; and
7. work effectively as a member of a team.

Course Outline

The sequence below sets out a weekly theme. The lecturing team reserves the right to make changes as they see fit.

Week	Theme:
01	Introduction to Data Visualisation & Tools
02	Types of Visualisations
03	Design Principles
04	Perception
05	Visual Encoding and Colour
06	Narrative Structures and Presentation Skills
07	Dashboards and Infographics
08	Data Visualisation in Industry
09	Ethics and Data Visualisation
10	Future trends
11	Project Presentations
12	Project Presentations

Learning and Teaching

This course has a 1 hour lecture session, and a 2 hour active learning session, each week. Each student also has a 2 hour lab slot available (starting week 2) which will be used for tutor supported self-learning and group project work.

In addition to the weekly classes, students are expected to spend approximately another seven hours per week on activities related to this course. These activities include reading, revising, practicing, and preparing assessments.

Teaching Staff

Lecturer:

Andrew Eberhard
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Room: 260-451

Tutor:

Andy Nguyen
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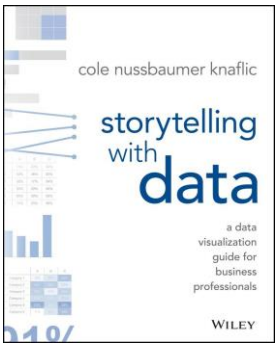
Room: 260-110

Learning Resources

All materials for this course will be provided via Canvas.

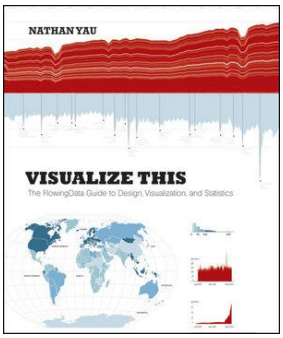
The text books for the course are:



Storytelling with data: a data visualization guide for business professionals

Author: Cole Nussbaumer Knaflic
Date: 2015
Publisher: Wiley

Note that an electronic version of this book is available for free via the University library. See Talis for the link.



Visualize this: the FlowingData guide to design, visualization, and statistics

Author: Nathan Yau
Date: 2011
Publisher: Wiley

Note that an electronic version of this book is available for free via the University library. See Talis for the link.

Assessment

Visualisation Critiques	10%	Individual
Data Exploration	20%	Individual
Infographic Project	30%	Group
Exam	40%	Individual
	100%	

Pass requirement: Students are required to pass the exam, as well as course work, in order to pass this course.

The broad relationship between these assessments and the course learning outcomes is as follows:

Learning Outcome	Visualisation Critiques	Data Exploration	Infographic Project	Exam
1		✓	✓	✓
2		✓	✓	✓
3	✓	✓	✓	✓
4	✓			✓
5			✓	
6			✓	
7			✓	

✓ = the learning outcome applies here

Academic integrity: In attempting any assessment, students agree to adhere to all the principles and practices of academic honesty and integrity for the University of Auckland outlined here: https://www.auckland.ac.nz/en/about/learningandteaching/policies-guidelines-and-procedures/academic-integrity-infoforstudents.html. The work that a student submits for marking must be the student's own work, reflecting his or her learning. A student's submitted work may be reviewed against electronic source material using computerised detection mechanisms. Any form of cheating, plagiarism, assistance in cheating, unfair collaboration, or other behaviour deemed to be academic misconduct will not be tolerated. Academic misconduct will be dealt with according to University's Student Academic Conduct Statute outlined here: https://cdn.auckland.ac.nz/assets/central /about/the-university/how-the-university-works/policy-and-administration/studentacademic-conduct-statute.pdf.

Inclusive Learning

Students are urged to discuss privately any impairment-related requirements face- to-face and/or in written form with the course convenor/lecturer and/or tutor.

In the event of an unexpected disruption

We undertake to maintain the continuity and standard of teaching and learning in all your courses throughout the year. If there are unexpected disruptions the University has contingency plans to ensure that access to your course continues and your assessment is fair, and not compromised. Some adjustments may need to be made in emergencies. In the event of a disruption, the University and your course coordinators will make every effort to provide you with up-to-date information via Canvas and the university web site.