

Danish School of Media and Journalism VK - Interactive Design Course description Spring 2022

4. semester

Course: Visualizing Data

ECTS: 10

Aims:

The course will focus on visual storytelling using datasets as the primary source. Students will learn about different types of data, how they can be visualized, interacted with and presented in a way that effectively conveys a message in an effective, engaging and trustworthy manner. The use of data visualization and information graphics throughout history will be briefly discussed. An experiential course, the emphasis is placed on hands-on development of contemporary digital, online-based interactive data visualization experiences.

Module's central subject elements are:

- Data Gathering, Data Management, and Data Validation
- Information Visualization
- Visual Design
- Storytelling

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Students will:

- Research a given topic to identify and collect related datasets
- Critically reflect on sources, validity, and quality of the collected datasets
- Use storytelling theory and narrative models to plan and execute engaging visually-driven, interactive, and multimodal stories to present the information within their collected datasets
- Discover specific affordances tied to the nature of the individual datasets
- Argue both orally and in writing for their process and design choices

Pedagogical and didactic approaches :

The course is a combination of lectures, group work, teach-back, self-study, solving exercises and assignments. Tasks and exercises are solved individually or in groups. In the process, the emphasis is placed on analysis and reflection and feedback on own and others' products and process.

Working methods:

Graphic design, information visualization theory, visual communication theory, idea generation technique, programming, prototyping, wireframing, user interface design, visual storytelling theory, oral argumentation, presentation technique.

Learning outcomes:

The students will obtain the following during the course:

Knowledge and understanding:



- Information Visualization in a historical and contemporary perspective
- Storytelling and narrative theory and methods used to convey data-driven messages
- Critical assessment of data sources and validity of datasets
- Ethical and moral considerations concerning both positive and negative aspects of datadriven projects
- Data visualization as a way to reveal complex structures, flows, and relationships in a comprehensible visual form

Skills:

- Design, execute and present both static and dynamic data visualizations on analog and digital media
- Use data as a primary source for communicating messages and ideas
- Use data visualization in a reflective, informed and ethically sound way
- Collect and sanitize data from relevant reliable sources
- Use their graphic design and interface design skills to make interactive data visualization
- Argue orally and in writing for their data collection process, use of narrative structure, and design choices of their projects with particular regard of the affordances of the chosen media

Competences:

- develop data visualization products based on critical assessment of relevant data sources.
- integrate data visualization as a part of a larger communication product

Literature (hand out):

excerpts from:

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- Heller, S. & Landers, R. (2014) "Infographics Designers' Sketchbooks" Princeton Architectural Press
- McCandless, D. (2014) "Knowledge Is Beautiful: Impossible Ideas, Invisible Patterns, Hidden Connections-Visualized" Harper Design
- Yau, N. (2011) "Visualize This: The Flowing Data Guide to Design, Visualization, and Statistics" (2011) Wiley
- Kirk, A. (2016) "Visualising Data: A Handbook for Data Driven Design" Sage
- Heydt, M. (2015) "D3.js By Example" Packt Publishing

Literature (available online):

 freecodecamp.org (2019) "Data Visualization with D3.js - Full Tutorial Course" (https://www.youtube.com/watch?v= 8V5o2UHG0E

Attendance:

Attendance is required for all scheduled teaching hours. Active participation is mandatory in exercises, assignments, group work, and peer feedback sessions.

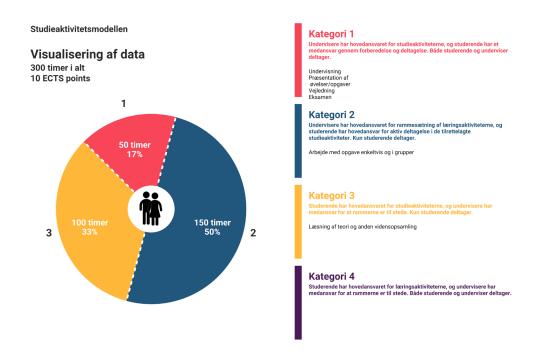
Exam/Grading:

30-minute oral exam (+10 minutes per person in group exams, maximum of four people) The project is assessed according to the 7-step scale by an external examiner. To be legible for the exam, the course assignments must be submitted and approved in a timely manner, and the student must have been active and met the requirements for meeting and compulsory attendance.

Study Activity Model:

Side 2 / 3

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