Aalto University
School of Science

CS-E5250 Data-Driven Concept Design

5 ECTS

11.1.2021 – 17.2.2021

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Agenda

- Contents
- Learning Outcomes
- Structure and DLs
- Grading

CS-E5250 Data-Driven Concept Design Contents

Basics of qualitative and quantitative analysis of user research data,
creative problem solving,
concept development and visualisation, and
stakeholder and marketing communications.

CS-E5250 Data-Driven Concept Design
Learning outcomes

After this course:

- You know how to prepare and analyse common user research data to produce relevant user knowledge for data-driven design.
- You are, as part of a team, able to apply creative problem-solving methods in a rigorous manner to find innovative solutions based on demonstrable potential and limitations.
- You know how to create product and service concepts and develop select parts into visualised prototypes of various fidelity.
- In addition, you know how to present the designs and argue your design decisions in a clear and concise manner to various stakeholders.

CS-E5250 Data-Driven Concept Design Structure

- Periods III (11.1.2021 – 17.2.2021, 7 weeks)
- 5 ECTS = on average 133h of work for the average student to reach grade 3 (good)
- Mondays: Topical Lectures + Assignment briefs
- Wednesdays: Workshop or Lab sessions + Q&A
- 5 Assignments
- Workload:
  - Lectures and Workshops & Labs 20h
  - Preparing and reading study materials 16h
  - Individual assignments 62h
  - Group assignments 35h

CS-E5250 Data-Driven Concept Design

Start Date	Topic	DL (final part)	Weight/Points Individual+group
Mon 11.1.2021	Qualitative Data Analysis (ATLAS.ti)	Mon 25.1.2021	10+3
Mon 18.1.2021	Quantitative Data Analysis (SPSS)	Mon 1.2.2021	7+0
Mon 25.1.2021	Creative Problem Solving	Mon 8.2.2021	3+7
Mon 1.2.2021	Concept Design and Visualization Prototyping	Mon 15.2.2021	5+5
Mon 8.2.2021	Stakeholder & marketing communications	Wed 24.2.2021 (evaluation week)	10+0

Student must receive at least 40% of each Assignment's maximum points to pass

CS-E5250 Data-Driven Concept Design Grading

Points (max 50)	Grade
45 – 50	5
41 – 45	4
36 – 40	3
31 – 35	2
25 – 30	1
0 – 24	0

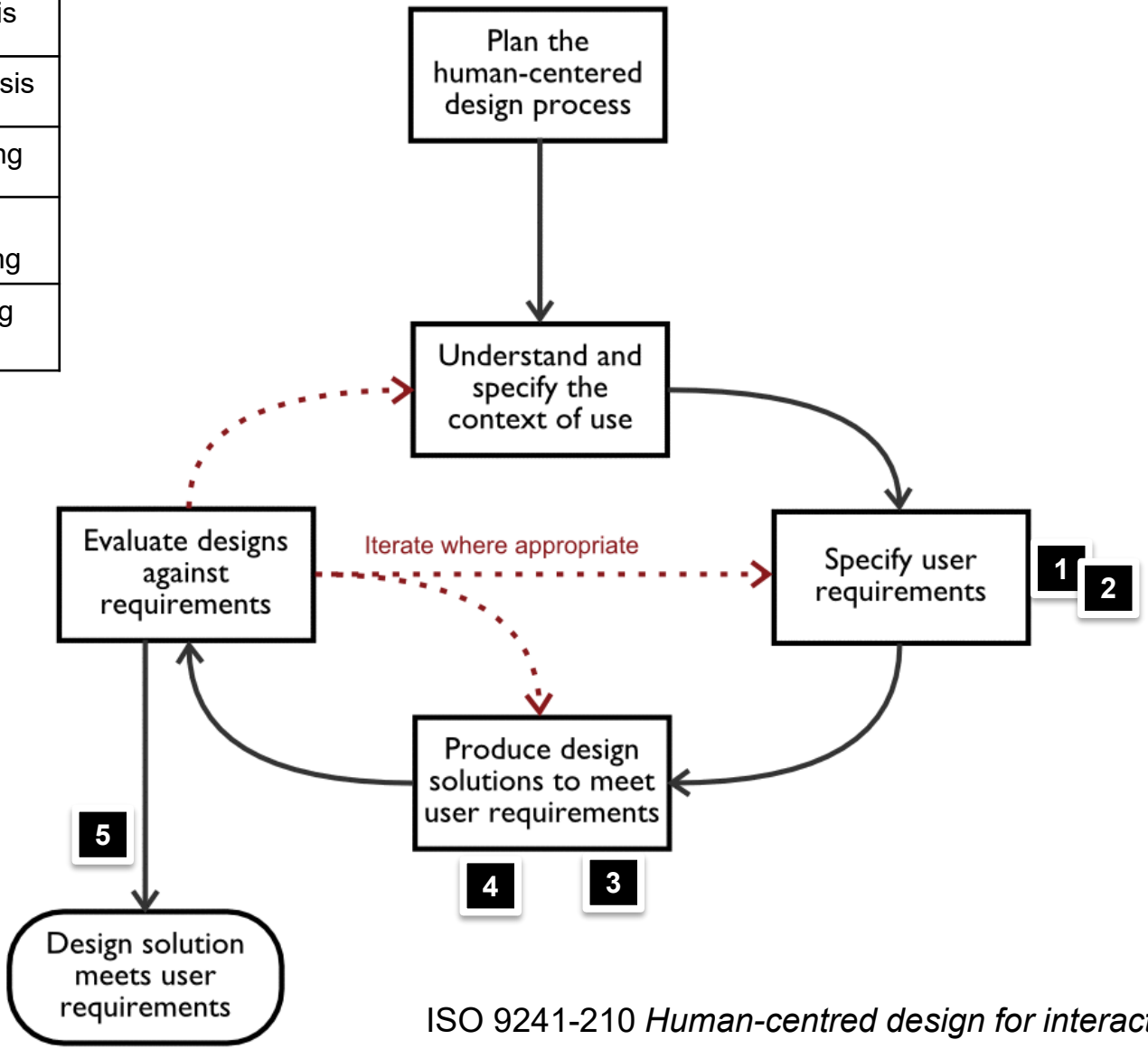
Individual grading criteria included with each Assignment

Concept Design Process

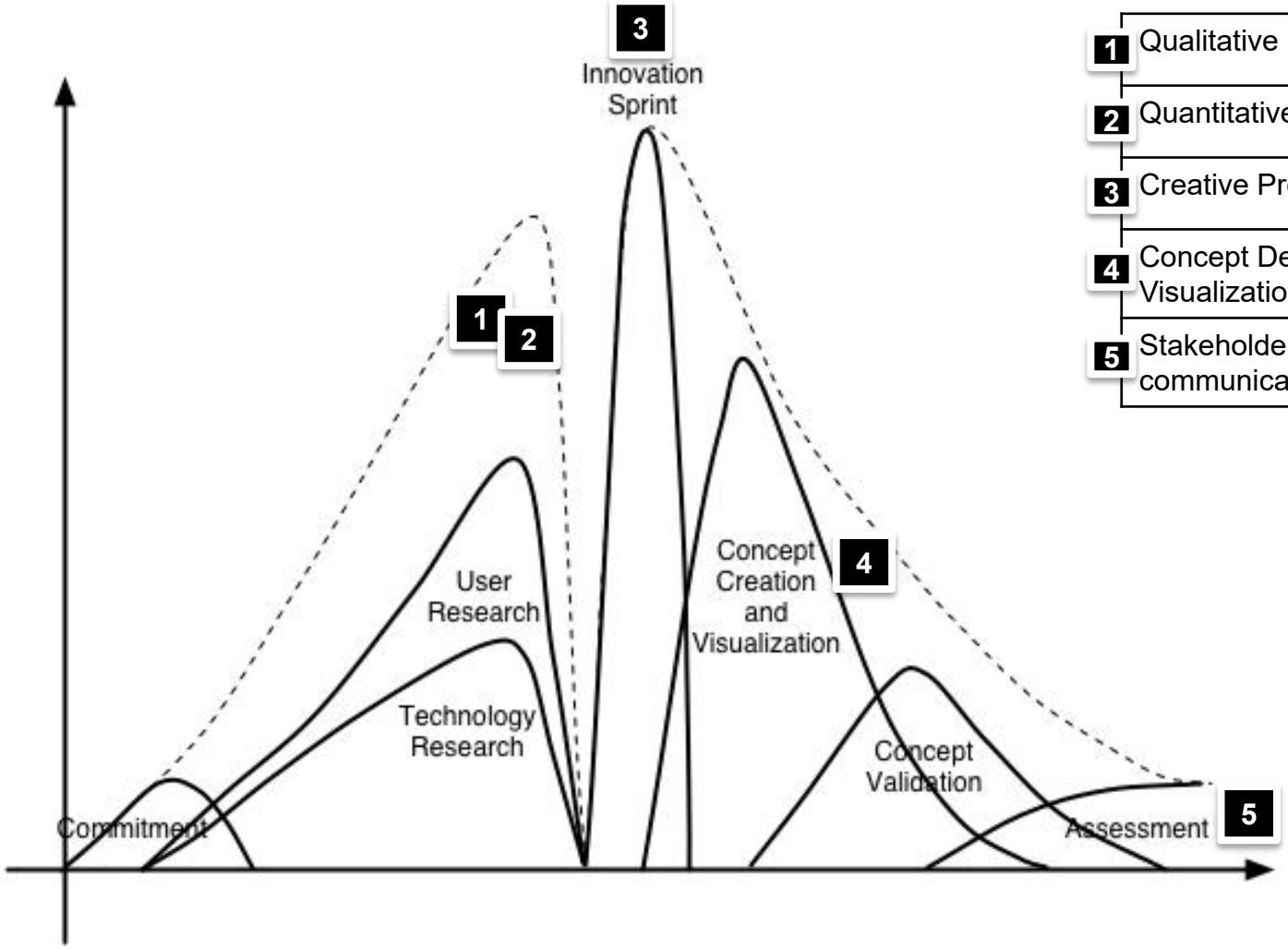
- Thousands of variations
- Mostly only one beef

- Remember what we are doing in this course!

1. Qualitative Data Analysis
2. Quantitative Data Analysis
3. Creative Problem Solving
4. Concept Design and Visualization, Prototyping
5. Stakeholder & marketing communications



ISO 9241-210 *Human-centred design for interactive systems*



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2. Quantitative Data Analysis
3. Creative Problem Solving
4. Concept Design and Visualization, Prototyping
5. Stakeholder & marketing communications

Nieminen, M.P. and Mannonen, P. User-Centered Product Concept Development. In International Encyclopedia of Ergonomics and Human Factors (2nd edition). CRC Press, Boca Raton, FL, USA.
2006. 1728-1732.

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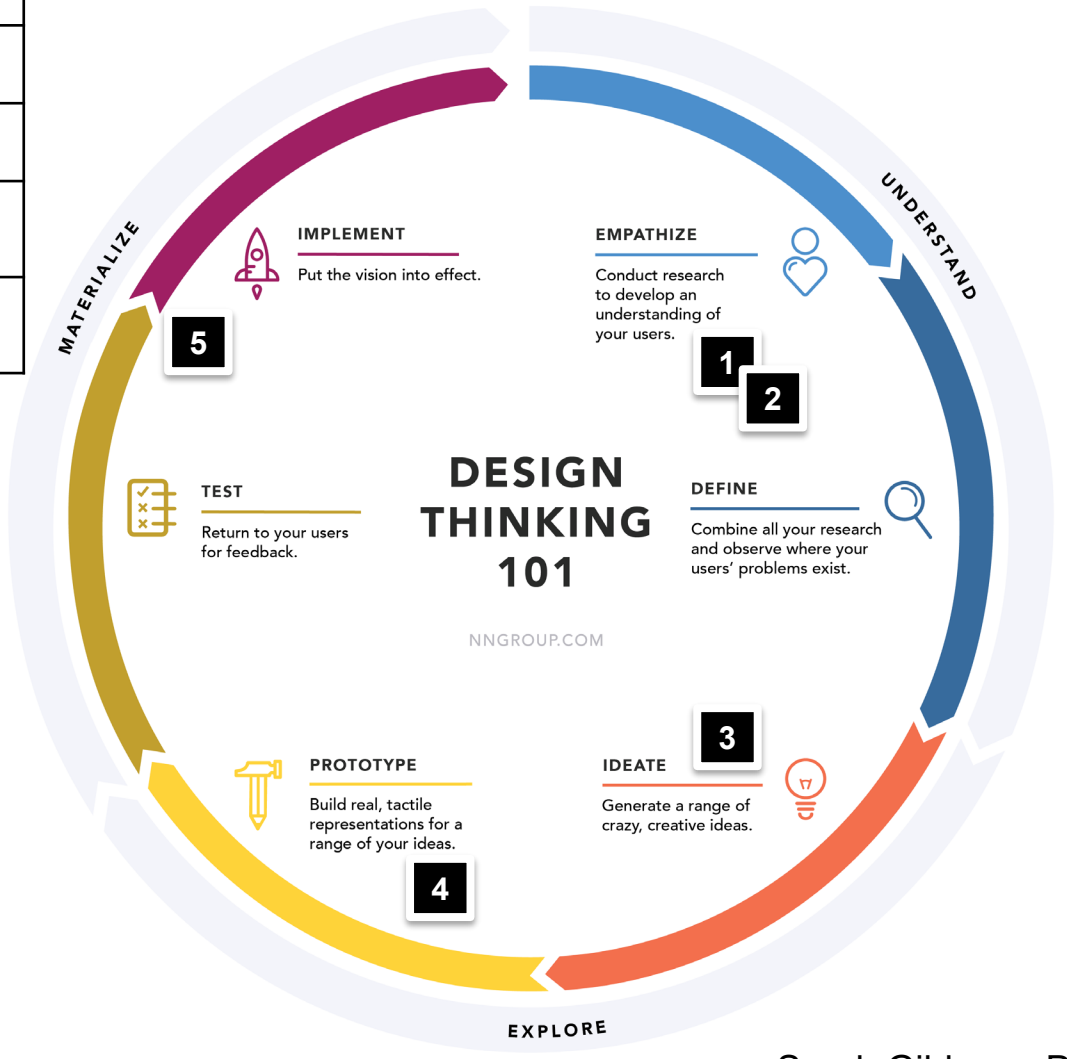

Sarah Gibbons, Design Thinking 101
Nielsen Norman Group