21E00052 Data-Driven Business

SYLLABUS

January 9th, 2023

Instructor's contact information	Course information
Henri Schildt Henri.schildt@aalto.fi Heli Helanummi-Cole Heli.helanummi-cole@aalto.fi Teaching Assistant: Dima Syrotkin Student meetings by appointment, please email.	M.Sc. course (E) 2022-2023, Period 3 (9.1.2023 – 9.2.2023) The course is in English https://mycourses.aalto.fi/course/view.php?id=37336

1. OVERVIEW

The purpose of this course is to help the participants understand the changes created by digitalization in the domain of organizations, management, and strategy. After taking the course, the students will be able to analyze how digital data flows can be used to optimize existing operations and create new products and services. Students will work in teams to analyze industry-level changes brought by digital technologies and develop data-enabled service concepts and associated business models.

2. PREREQUISITES

This course is open to all master's level students. Some elementary background knowledge in strategic management is desirable but not necessary.

3. LEARNING OUTCOMES

The students should develop broad basic understanding of contemporary use of data analytics, machine learning, and big data in creation of services and products as well as managing processes within and across organizations. The specific learning points are:

Knowledge and theory:
- Basic understanding of key technologies: big data, cloud computing, Internet of Things, digital platforms, and API ecosystems.
- Understanding of basic design principles in digital business, including modularity.
- Understanding and ability to analyze "digital disruption" of industries and to create realistic scenarios potential development paths.

- Understand how and why digital technologies are influencing business models, ecosystems, and platforms.
- Ability to analyze and design business models enabled by digital data.
- Understanding the function of data scientists and business analytics in corporations and understanding how professionals and activities are typically organized and used.
- Understanding how and why companies are adapting their organizational structures, culture, and practices to take advantage of new digital technologies.

4. ASSESSMENT, GRADING, EXAM FEEDBACK

The course grading is based on four criteria:
1. Participation and contributions in the classroom conversations (10%)
2. Group assignments, including peer evaluation (20%)
3. Individual pre-session assignments (30%)
4. Individual final assignment (40%)

Participation in the lectures and exercise classes is optional, but it influences the grade. The students are allowed to miss one session without penalties and after that they incur -1% penalty to the participation score for each additional session they miss.

5. ASSIGNMENTS

Group assignment: Digital and data strategies for a start-up company.
Max 20 points, deadline on **Tuesday 7.2. at 9pm**

Final Individual assignment: Analyzing and responding to industry changes.
Max 40 points, deadline on **Friday 10.2. at 9pm**

6. READINGS

The readings are assigned for each session, please see the schedule below.

7. SCHEDULE

The lecture schedule is displayed in the table below. Attending the lectures is optional. All teaching is done in a physical classroom (no Zoom/Hybrid).

Session	Date	Topic	Readings and preparation	Pre-session assignment due
#1	Mon 9.1.	Digital disruption and digital transformation (HS + HHC)	*Data Imperative Chapters 1 (optional) *Session one video, Welcome to the Course (Schildt) https://youtu.be/6SU7pcgc6lo	None
#2	Thu 12.1.	The data imperative (HS)	*Data Imperative Chapters 2 *Case study: Percolata (YouTube) *Session two videos 1 & 2 (Schildt): https://youtu.be/O_0PNn57Zhg https://youtu.be/2ryY0nfCJ8c	Session #2 pre-assignment MCQ
#3	Mon 16.1.	Data analytics and AI (HHC)	*Data Imperative Chapter 6 *Podcast #1: The AI Podcast Ep. 1, Deep Learning 101 *Podcast #2: The AI Podcast Ep. 70, Capital One *Session three video (Schildt) https://youtu.be/a-ReWejv8Zc	Session #3 pre-assignment MCQ
#4	Thu 19.1.	Complexity and modularity (HS)	*Data Imperative Chapter 4 *Case study: Relex Solutions *Session four video: https://youtu.be/y9kXmZfE4sY	Session #4 pre-assignment MCQ
#5	Mon 23.1.	Agile organizations and digital transformation process (HS)	*Data Imperative Chapter 5 *McKinsey report: Unlocking Success in Digital Transformations *Session five video (Schildt) https://youtu.be/4BOmWq5CQqA	Session #5 pre-assignment MCQ
#6	Thu 26.1.	Self-managed organizations and digital work (Dima)	Holacracy: A Radical New Approach to Management | Brian Robertson | TEDxGrandRapids Self-managing organizations: Exploring the limits of less-hierarchical organizing Experiments in algorithmic governance: A history and ethnography of "The DAO," a failed decentralized autonomous organization.	Session #6 pre-assignment MCQ
#7	Mon 30.1.	Digital strategies and platforms (HHC)	*Data Imperative Chapter 3 *Cusumano et al. 2020. The Future of Platforms. MIT Sloan Management Review, 61(3). *Case study: Tagwalk (FT) *Session seven videos (Schildt) https://youtu.be/nfR1Bqe-e5I https://youtu.be/bn6N26Pwgkc	Session #7 pre-assignment MCQ
#8	Thu 2.2.	Data: legal, ethical, and ecosystem perspectives (HHC)	* Jeremy Rifkin on the zero marginal cost society: https://www.youtube.com/watch?v=MBlWEOHqdOU *Case/Debate on big data: i. Evans (2022). There is no such thing as Big data. Financial Times May 27, 2022. https://www.ft.com/content/c93725c4-5e34-4b3b-aae8-dd4c241abebd ii. Zuboff (2015). Big other: surveillance capitalism and the prospects of an information civilization. Journal of information technology, 30(1), 75-89.	Session #8 pre-assignment MCQ

Session	Date	Topic	Readings and preparation	Pre-session assignment due
#9	Mon 6.2.	The future of digitalized business (HS+HHC)	*Data Imperative Chapter 8 *Case study: Stitch Fix Algorithm Tour *Session eight video (Schildt) https://youtu.be/KRfezLSGtJE	None
GA	Wed 8.2.	Group assignment presentations (HS+HHC)		

8. COURSE WORKLOAD

Classroom hours	24h
Class preparation	56h
Individual assignments	40h
Group assignments	40h
Total	160h (6 cr)

9. ETHICAL RULES

Aalto University Code of Academic Integrity and Handling Thereof
https://into.aalto.fi/pages/viewpage.action?pageId=3772443

10. OTHER ISSUES

- **Participation in the sessions is optional**
- Please register via Sisu
- Course materials will be available on MyCourses
- Please read session #1 slides carefully for all kinds of practical information