

UNIVERSITY OF OSLO

IN5090 – Health data and decision making

Lecture 1: Introduction



Today

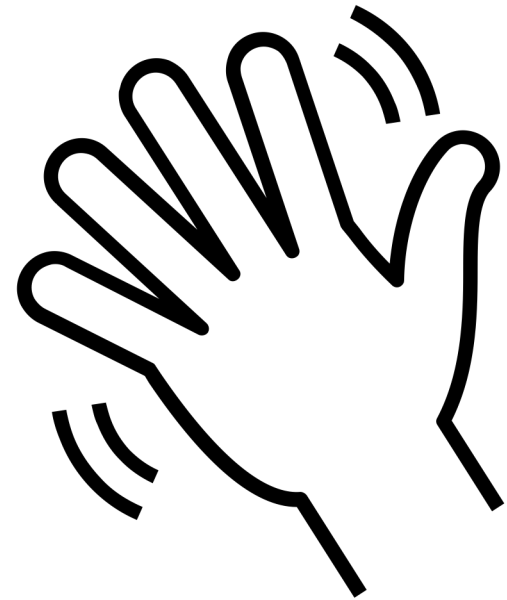
Course outline and practical information

- Who are we, who are you?
- Lectures
- Group sessions and obligatory assignments
- Exam

▪ Introduction to the themes of the course

- Production, processing, sharing, and use of data
- Patient, health professional, health service
- Standardization, types of health data, ai, and much more

Who are we, who are you?



Department of Informatics

← People ← Academic staff

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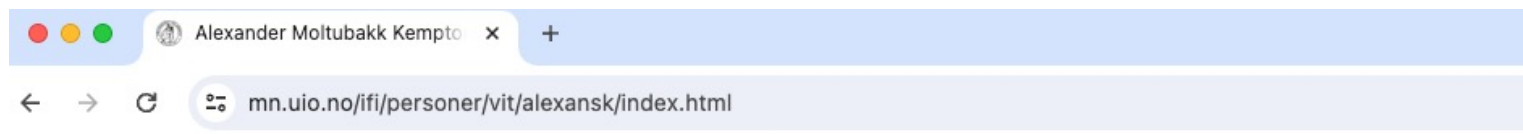
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UNIVERSITETET
I OSLO

Det matematisk-naturvitenskapelige fakultet

Institutt for informatikk

← Personar ← Vitskapeleg tilsette

Alexander Moltubakk Kempton

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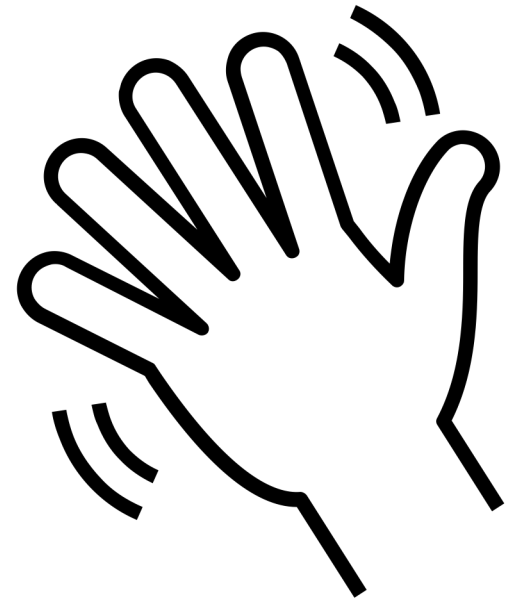
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[Download business card](#)

Who are you? (Menti)



Why take this course?

- Learn socio-technical and organizational perspectives on making health data accessible and actionable for decision-making
- How health data is enabled
- How data enables activities and services in the health care

Learning goals

- Have an overview of information needs in the health sector and the main sources of health data
- Have an understanding of health information sharing needs and challenges within and between health care organizations and contexts
- Can demonstrate familiarity with specific health data standards and their role in integration of health data
- Demonstrate familiarity with theories and concepts relevant to understand information use practices in organization
- Can analyze and identify opportunities and challenges for utilizing data driven decision making, including AI tools, in the health sector
- Can discuss and problematize data driven restructuring and process improvement in health care organizations
- Can describe and discuss legal, regulatory and ethical issues relevant to digitalization and data driven decision-making in health care organizations, including security, privacy and confidentiality

We are continuously improving the course, so **feedback** is much appreciated!



Elements of the course

- Lectures
- Syllabus
- Group sessions
 - Individual assignment (pass/fail)
 - Group assignments (pass/fail)
 - Seminar discussions
- Exam

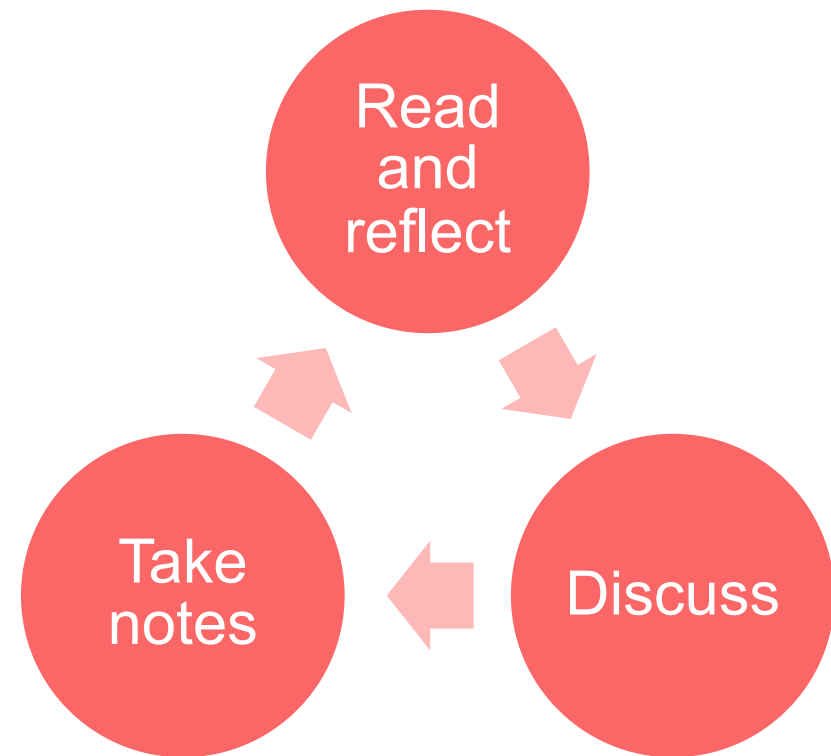
Lectures and Syllabus (web pages)

Group sessions

- Activities:
 - Self-study (DHIS2 fundamentals)
 - Group assignments
 - Group presentations

How to read the papers and chapters on the syllabus?

- Recommendation:
 - read the assigned paper before the lectures
 - use AI as a learning tool, not a summarizer

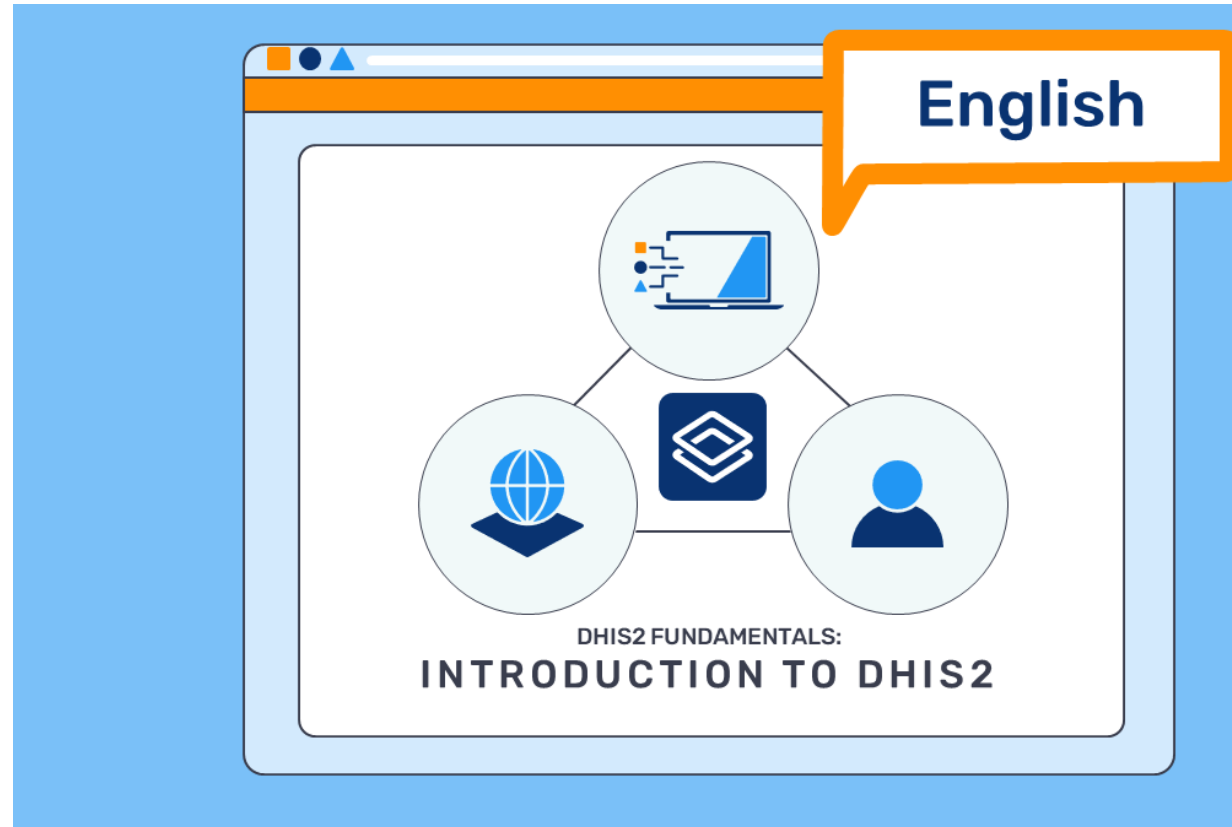


Assignments

- Assignment 1
 - Purpose: get hands on experience with data and basic analytics
 - Self-based course on DHIS2 platform
- Assignment 2
 - Purpose: get hands on experience with data and basic analytics
 - Design a DHIS2 dashboard
 - Present dashboard and reflections around it
- Assignment 3
 - Purpose: apply course framework and syllabus to experienced case
 - Describe and discuss a case based on experience from health practice
 - 2-3 page document + presentation
- Assignment 4
 - Purpose: relate guest lectures to course framework and syllabus
 - Summarize and reflect on guest lectures
 - 2-3 page document + presentation

Assignment 1: DHIS2 Self study

- Purpose:
 - Not become DHIS2 experts, but use it as a tool to reason around data
 - **Introduction to DHIS2**
 - Expected workload: 3 hours
 - **Aggregate Data Analysis Fundamentals**
 - Expected workload: 6 hours
- Send course certificates to alexansk@uio.no by Feb 12



Assignment 2

Work:

- Design a Mother and Child health **dashboard** for one district in Trainingland
- Reflect and discuss in your group

Present:

- You will **present** your dashboard in a group session
- In addition to the dashboard, your presentations must include **reflections** as specified
- Presentations date:

Your presentations should include reflections on the following:

- Which choices have you made in designing the Dashboards in terms of indicators and visualizations?
- Why did you chose to present the data in this way?
- What are the strengths and weaknesses of your Dashboard design?
- What are the main learnings from doing the DHIS2 Fundamentals course?
- What do you think are the most important terms used to describe data in the online course?

Exam

- Home exam over 3 days
- Case based – analyze and discuss course-related issues based on a case description
- Long-form, not many questions
- 12-14 May



Why a course on health data?

- Menti: write one or more keywords for why you think health data is such a central topic in the digitalization of healthcare

Meld. St. 9

(2012–2013)

Melding til Stortinget

Én innbygger – én journal

Digitale tjenester i helse- og omsorgss

- Patients: insight into their own health
- Health personnel: documentation, support decision making and coordination
- Health system: quality and research



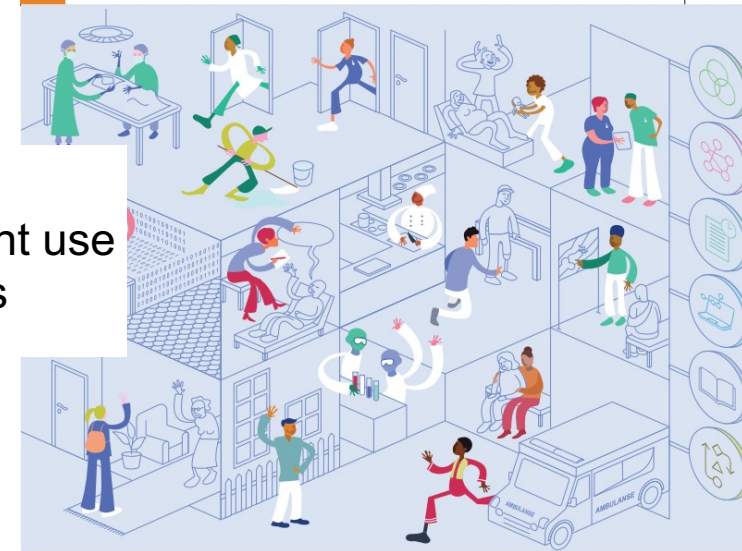
NOU

Norges offentlige utredninger 2023: 4

Tid for handling

Personellet i en bærekraftig helse- og omsorgstjeneste

- Innovation
- More efficient use of resources



- New medicines and treatments
- Higher quality of diagnostics and treatment
- Higher quality of clinical practice and better-equipped health personnel
- Health promotion and improved preventive health work
- Better drug monitoring and increased knowledge of the effects of active drugs
- Improved crisis preparedness

RAPPORT

HELSEDATA – STORE VERDIER PÅ SPILL



MENON-PUBLIKASJON NR. 69/2018

Av Erland Skogli, Torbjørn Bull Jenssen, Lars Stemland Eide, Marcus Gjems Theie

Norway shall invest in AI in areas where we have particular advantages, such as **health**, ocean, public administration, energy, and mobility



Nasjonal strategi for kunstig intelligens



Baner vei med kunstig intelligens

Vestre Viken HF er det første helseforetaket i landet der kunstig intelligens nå tas i bruk i stor skala til fordel for både pasienter og ansatte.

Kommunikasjonsavdelingen
Publisert 28.08.2023



So, why is it complicated?

- Even though everyone agrees that we need to make more use of health data in decision-making and value creation, all experience shows that it is complicated to achieve. It is difficult to obtain, produce, link, share, use insight
- Menti: add one or more keywords for what makes it challenging to realize visions of health data use and innovation

So, why is it complicated?

- The medical fields are evolving, knowledge and thus data change over time
- Many different organizations, with different goals, needs, and understandings
- Many different professions, with different goals, needs, and understandings
- Privacy
- Data collected for one purpose is not always easy to use for other purposes