

Digitaliseringssertifikat

STUT

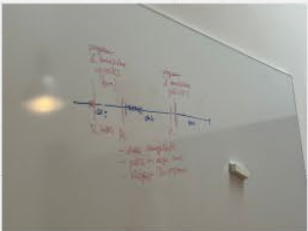
18. september 2024

Tidslinje

- **27. november 2023:** Bestilling fra **universitetsledelsen**
- **29. november 2023:** Orientering for **studieutvalget ved fakultetet**

- **13. desember 2023:** Møte i **instituttets arbeidsutvalg**
- **14. desember 2023:** Orientering i **instituttets utdanningsutvalg**
- **20. februar:** Møte i **instituttets arbeidsutvalg**
- **21. februar:** Møte med **studiedekan og fakultetsadministrasjon**
- **29. februar:** Diskusjon i **instituttets lederforum**
- **7. mars:** **Arbeidsgruppe for faglig innhold** bestemt i **instituttets lederforum**
- **11. mars:** **Arbeidsgruppe for faglig innhold** oppnevnt
- **20. mars:** Første møte i **arbeidsgruppe for faglig innhold**
- **30. mai:** Andre møte i **arbeidsgruppe for faglig innhold**
- **3. juni:** Statusmøte med **universitetsledelsen**
- **13. juni:** Presentasjon av tidlig utkast for **instituttets utdanningsutvalg**
- **24. juni:** Møte i **instituttets arbeidsutvalg**
- **9. august:** Via **studiedekan** kontaktet utdanningskomiteen ang. **referansegruppen**
- **20. august:** Møte i **instituttets arbeidsutvalg**
- **21. august:** Diskusjon rundt aktuelle ansvarlige fagmiljøer/faglærere i **instituttets lederforum**
- **29. august:** Oppnevnt **studieadministrativ koordinator**
- **2. september:** Møte med **studiedekan**
- **4. september:** Tredje og siste møte i **arbeidsgruppe for faglig innhold** x **instituttets arbeidsutvalg**
- **10. september:** Møte i **instituttets arbeidsutvalg**
- **10. september:** Møte med **studiedekan og fakultetsadministrasjon**
- **10. september:** Enighet om sammensetning av **referansegruppen**
- **18. september:** Orientering for **studieutvalget ved fakultetet**

- **26. september:** Presentasjon for **instituttets utdanningsutvalg**
- **September:** Oppnevne 2-3 **emneansvarlige**
- **Oktober:** Første møte i **referansegruppen**



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- 2 Digitalization is a transformative process that utilizes digital technologies to:**
- Rethink artifacts, processes, and socio-technical structures
 - Computationally process and organize digital information (digitizing)
 - Innovate, automate and evolve development practices and organization within businesses
 - Support new experiences, accessibility and practices through impactful changes at all levels: users, industries, and society

Foundations of digitalization / The broad impact of digitalization:
Digitization technology: algorithms, AI, big data, blockchain, IoT
Digital transformation strategies: tools, models, competences, practices, strategies
Digital platforms and ecosystems: automated and data-driven processes
Impact of novel informatics-related methods: ML, visualization, computational creativity, business, systems thinking, software development



DIGI emnepakken høsten 2024

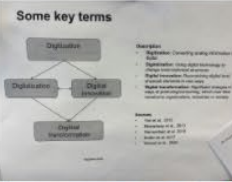
I fremtiden vil kombinasjonen av spesialisert fagkunnskap og digitalt forsterket samarbeid være avgjørende i både arbeid og samfunnsforhold. Sammenheng, samarbeid, samarbeid og samarbeid vil være avgjørende i både arbeid og samfunnsforhold.

- Alex: when do they want to learn? -> programming skills
- DIGI4NOR give an overview of programming -> don't learn any programming
 - Alex: programming is a lot, I've enough stuff in my life
 - Gunnar: basically work with a technical company - not program itself - but manage the project
 - Capt: Teaching the thinking is a programmer, what can be done with the kind of thinking
 - Capt: Basic programming skills are getting easier to get, but broader is what you need to get
 - Capt: This is to use ChatGPT for instance - if we don't know the subject of programming - how do we ask for a website?
 - Capt: Need to know how to program at different stages of a career
 - Capt: How much will it interact with their different background? - interacts with the field is important
 - Capt: IT competence for a geology student is not the same as for a music student
 - Kapte: The demand from the students will be diverse - ethics for instance - how algorithmic responsible AI development challenges, standardizing
 - Alex: be more open to what kind of students we get - push up and see what is working with the sign module
 - Kapte: 10 up courses should be really solid
 - Capt: the need time to understand all things
 - Capt: What is in the field of the program, what is 'digitalization'?
 - Capt: What is in the field of the program, what is 'digitalization'? - what separates it from other disciplines? - what separates it from other disciplines? - what separates it from other disciplines?
 - Alex: we have to think - what we have a business has to be - get an overview of the information field - how helpful is that? it has to be some kind of direction
 - Alex: We're looking at ethics - we should teach more about the technical side
 - Alex: What is the purpose of the 20 points? Students want to use AI, computational methods, in a technical all tools and products in the future will be digitized
 - Kapte: They've had executive course on big things' course in 2-3 study points. Our colleagues went there, and they didn't understand anything. Though they would meet introduction, but went directly into
 - Gunnar: Taken courses as BI that were evaluation to low or non-existent - but well known to get some basics. Otherwise the needs around those basics. Perspectives
 - Gunnar: how do we integrate everything? we need broad perspective
 - Capt: SBUS - soft course - all endogenous - technology AI - endogenous - working on tools and
 - Capt: people are more likely to be interdisciplinary - domain experts etc
 - Capt: what we've integrated most with has to be everyone to talk together? Communicate. How do we talk together? Exchange of knowledge is important, before we actually get into anything concrete - more
 - Yuse: Two experiences from Finland. Common 10-course course where different students came together. Was difficult to make work because students have so different backgrounds - different interests - making teaching it all. Initiative from university as a whole - 10000 - for year since start and have had 10000 people take it. Give core stress of ML, or AI without assuming any mathematics or programming. Work
 - Yuse: Set BI on the stage and think about 'resolving good future students
 - Gunnar: how does this relate to IT and IT2 and IT3 and IT4?
 - Alex: Elements of AI is a good example of that
 - Alex: I like 'Thinking as an informatics person' - foundations, not programming - but then comes a programming module with top
 - Yuse: a lot of different people with different needs. Not sure how
 - Capt: why take a certificate rather than a single course?
 - Capt: what does digitalization mean? Maybe be some evaluation between learning tool skills? What are possibilities and challenges? Can high level be the starting point?
 - Gunnar: what is digitalization vs. not digitalization?
 - Alex: Talk about it, doing approach? Uncertainty to iteration, data/cultural dynamics vs. digitalization as a phenomenon - unambiguous technical issues
 - Capt: Both things are important
 - Kapte: should not assume everyone what other places are doing in terms of digitalization

Betjnelser



Mete 2



Digitization
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Digital transformation
The process of using digital technologies to transform business processes and customer experiences.

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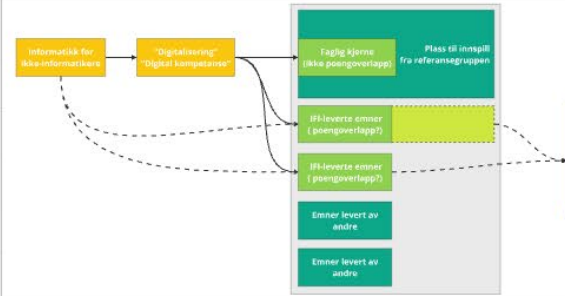
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Informasjon for data-informasjon

Digitalisering

Faglig kompetanse

Plass til innspill fra referansgruppen

Arbeidsutvalg og arbeidsgruppe for faglig innhold

Arbeidsutvalg:

- Stephan (instituttleder)
- Ragnhild (utdanningsleder)
- Joshi (utdanningsleder)
- Kristin (studieleder)

Arbeidsgruppe for faglig innhold:

- Joshi (arbeidsutvalget)
- Katja Hydle (DIN/DIG)
- Alexander Kempton (IS/DIG)
- Yves Scherrer (LTG/ML)
- Kai Olav Ellefsen (ROBIN/ML)
- Çağrı Erdem (ND/DIS)
- Ingrid Yu (ASR/PROG)
- Gunnar Bergersen (SE/PROG)
- Kristin Bråthen (ADM)
- Mari Saua Svalastog (ADM)

Faglærere:

- Faglærer (DIG)
- Faglærer (ML)
- Faglærer (DIS)

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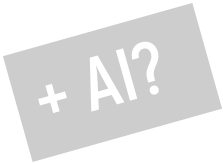
- Knut (leder, MN)
- Joshi (IFI)
- Kristin/Anna (IFI)
- Maria Astrup Hjorth (JUS)
- Gerald Torgersen (ODONT)
- Kristin Asdal (SV)
- Hugo Lundhaug (TF)
- Ingvoll Rasmussen (UV)
- Rune Enger (MED)
- Arnt Maasø (HF)
- Studentrepresentant

[← Studies](#) [← Study programmes](#)

Digitalization certificate (bachelor's supplement)

Credits: 20

Are you interested in learning how novel digital technologies, tools, methods, processes, and strategies increasingly influence all parts of society? The digitalization certificate covers the broader impacts of digitalization and also includes a selection of relevant foundational topics such as systems thinking, digital innovation, machine learning and big data. The courses offered are specifically tailored for students from various fields and require no prior background in mathematics or computer science.



+ AI?

[→ Why choose this programme?](#)[→ Certificate structure](#)[→ Learning outcomes](#)[→ Career opportunities](#)[→ Admission](#)

MÅLGRUPPE: STUDENTER UTENFOR IFI

- Programstudenter ved UiO, men utenfor IFI, som har avlagt minimum 60 studiepoeng (2-3. årsstudenter)
- Også innvekslingsstudenter fra andre land
- Forventer ingen matte- eller realfagsbakgrunn

(Samfunnsvitenskap, humaniora, jus etc.)

10 studiepoeng, vår 2025
Definert og gjennomført av IFI
OBLIGATORISK KJERNEEMNE

5-10 studiepoeng, (vår 2025), høst 2025, vår 2026
Definert og gjennomført av IFI **eller andre**
VALGFRIE EMNER

5-10 studiepoeng, (vår 2025), høst 2025, vår 2026
Definert og gjennomført av IFI **eller andre**
VALGFRIE EMNER

20 STUDIEPOENGSS DIGITALISERINGSSERTIFIKAT

Digitalization certificate

You will learn about core concepts and the transformative impact of digitalization, including how it reshapes products, services, and organizational processes. You will gain insight into digital transformation strategies and how using digital tools, methods, and technologies supports data-driven, automated, and innovative processes within organizations and ecosystems. With your own academic background, you will learn to reflect on relevant issues related to digitalization and apply your knowledge to engage with interdisciplinary perspectives on digitalization.

After completing this certificate, you can...

Knowledge

- Define core concepts such as digitalization, digitization, digital technologies, and digital strategies.
- Discern how digitalization impacts individual users, organizations, and society.
- Explain how novel tools, methods, and technologies drive digital transformation across different sectors.

Skills

- Manipulate and computationally process different sources of data.
- Identify challenges and opportunities related to ongoing and future digitalization efforts within your own academic field.
- Reflect critically and ethically on how digitalization impacts security, sustainability, inclusion, and integrity.

General competence

- Reflect on your own role and perspectives on topics related to digitalization.
- Engage in cross-disciplinary discussions about digitalization.

DIG2000 – Digitalization (10 ECTS)

This course provides a high-level understanding of digital technologies and programming, focusing on tools, computation, algorithms, and data processing. It covers core aspects of digitalization that enable you to theoretically structure and discuss digital transformation processes across various sectors and disciplines. The course explores the wider implications of digitalization, emphasizing its impact on society. You will gain the vocabulary and critical thinking skills necessary to evaluate the effects of digitalization within your own academic fields.

This course is the mandatory introductory course of the "Digitalization certificate" and introduces the concepts and terms you will meet in elective courses.

After completing this course, you can...

- TBD
- TBD
- TBD
- TBD
- TBD

DIG2200 – Digital innovation (5 ECTS)

The course provides insights into innovation management and how digitalization changes innovation management. Innovation management starts from the organizational level, while digital innovation includes inter-organizational collaboration. The course is based on digital innovation research: Digital innovation processes, resources, and digital innovation as results. The course uses examples from business model innovation (from product-based to performance-based), the use of technology for fact-based decisions, and from calendar-based to needs-based services, digitalization and servitization processes, and product-service systems.

After taking the course, you will:

- Have an overview of how digital innovation changes the organization
- Understand business model innovation
- Understand the use of technology for needs-based services
- Have insight into service provision and product-service systems
- Have knowledge of digital innovation
- Be able to organize digital innovation processes
- Be able to assess different business models
- Be able to evaluate and adapt various digital services
- Be able to reflect on challenges with digital innovation

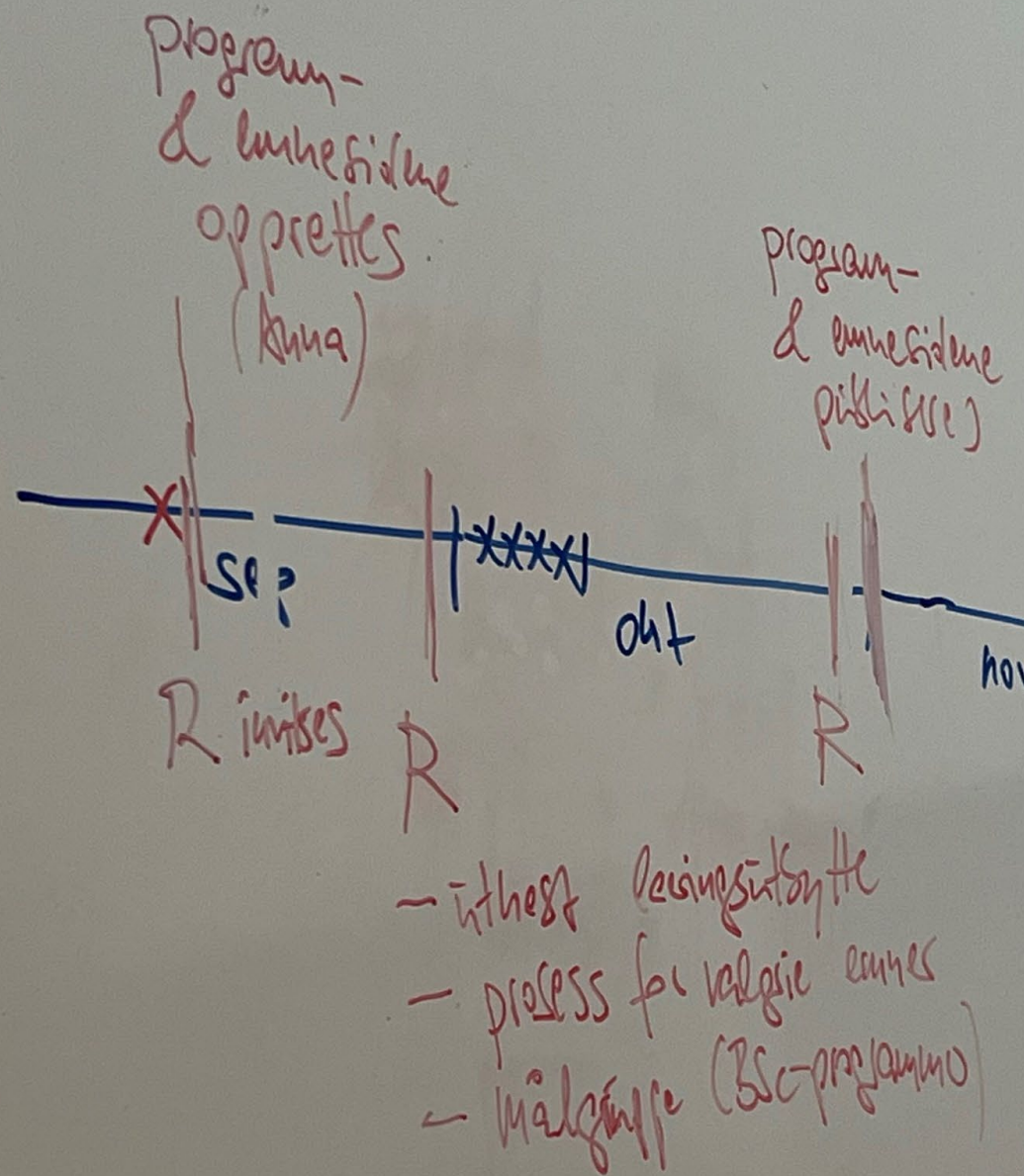
Bare et eksempel!

DIG2100 – Digitalization and AI (5 ECTS)

About the course

After completing this course, you can...

- TBD
- TBD
- TBD
- TBD
- TBD



Tidslinje fremover

September/oktober:

Opprette sertifikat- og emneside (særegen frist). Referansegruppen konstitueres.

Oktober:

Definere læringsutbytte for det obligatoriske emnet. Identifisere målgruppen.

21. november:

Program- og emnesidene publiseres.

1. desember:

Interesserte studenter søker opptak via Søknadsweb.

3. desember:

Studentweb åpner for emnepåmelding våren 2025.

Rammebetingelser

- Piloten har en ramme på 100 studenter.
- Må ha fullført minimum 60 studiepoeng. Opptak og rangering gjøres på bakgrunn av at vi definerer hvilke treårige bachelorprogrammer som kvalifiserer, deretter rangeres de som har studert lengst øverst, til slutt loddtrekking.
- Vil ikke være kapasitet til å ta innpassingssaker.
- Vi etablerer sertifikatspesifikke emner som ikke innebærer gjenbruk av eksisterende IN/DIGØK/DIGHEL-emner. Må se nærmere på studiepoengoverlapp.
- Kjerneemnet DIG2000 på 10 studiepoeng er obligatorisk og må tas først, etterfulgt av to valgfrie emner som må være på 5 studiepoeng. Foreløpig kun tenkt DIG2000 på vårsemesteret og valgfrie emner på høstsemesteret, men bør diskutere med referansegruppen (4. + 5. semester eneste mulighet?).
- IFI vil tilby 2 valgfrie emner på høstsemesteret på 5 studiepoeng, sammen med emner levert av andre institutter. Til å begynne med ønsker vi ikke for mange valgfrie emner siden piloten består av 100 studenter.
- Viktig med tett dialog med MN fremover: Anne-Lise rundt administrative forhold, nettedaktører rundt nettsider etc.