AALBORG UNIVERSITET

STUDIEORDNING FOR MASTERUDDANNELSEN I DIGITALISERING AF SUNDHEDSVÆSENET, 2024

MASTER
AALBORG

MODULER SOM INDGÅR I STUDIEORDNINGEN

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DIRECTIVES, REGULATIONS AND REQUIREMENTS FOR DIGITAL HEALTH PRODUCTS

2025/2026

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

Directives, regulations and requirements for digital health products, with the aim of providing students with insight and familiarity with the new requirements, regulations, and directives within digital health. Through this course element, students will be able to contribute to the technically required transformation towards the digital health sector. This is achieved by teaching students how to qualify health IT as medical devices. Furthermore, they learn professionally to engage in and contribute to discussions and knowledge sharing about regulations and directives regarding the use of health IT solutions and special considerations when these solutions are based on artificial intelligence.

LEARNING OBJECTIVES

KNOWLEDGE

- Can account and describe the purpose of standards, regulatory conditions, documents, and organizations relevant for digital health products.
- Can account for phases in regulatory life cycle of digital health products internationally and in Europe, including organizational, practical, timing requirements and evidence related to quality control.
- Can describe the standardization process and can account for the relevant standardization organizations.
- Can describe the special considerations for digital health products when based on artificial intelligence.

SKILLS

- Can prepare a clinical evaluation plan, a risk management plan, and identify challenges in relation to regulatory approval of a digital health product.
- Can establish the necessary documentation for approval of digital health products.
- Can identify strategies for handling protection of personal data, cybersecurity, and requirements for traceability.
- Can identify risk classification for a digital health product and the associated classification requirements.

COMPETENCES

- Can identify relevant standards for a given digital health product

TYPE OF INSTRUCTION

The teaching format is blended learning based on self-study of both written material and video clips, discussion in study groups, online seminars, case-studies and workshops, where students will train short presentations of their work in groups.

EXAM

EXAMS

Name of exam	Directives, Regulations and Requirements for Digital Health Products
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Forordninger, regulativer og krav til brug af digitale sundhedsteknologiske produkter
Module code	SOTDH24M1_1
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Pielmeier

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

DESIGN, DEVELOPMENT AND IMPLEMENTATION OF DIGITAL TECHNOLOGIES IN A HEALTHCARE CONTEXT

2025/2026

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The students are introduced to research-based theories, concepts, and approaches within and to the management of user-driven innovation processes, with an emphasis on methods for facilitating the involvement of users and stakeholders (e.g., healthcare professionals, citizens/patients/family members, as well as system developers/owners) in the design and implementation related to change and digitalisation in the healthcare sector. The course emphasizes practical application with the aim of enabling students to participate in design, development, and implementation projects. The course will be a combination of physical attendance, online seminars, and group work. The module is anchored within the Research Group for Techno-Anthropology & Participation, Department of Sustainability and Planning.

LEARNING OBJECTIVES

KNOWLEDGE

- Knowledge of project management and how they support user involvement in design, development, and implementation of digital health projects.
- Explain different technological innovation theories and concepts, -methods, -tools, perspectives and -strategies for the design, development, and implementation of digital health technologies.

SKILLS

- Identify, select, and apply project management tools for planning of design, development and implementation of project processes.
- Plan context-sensitive facilitation strategies to enhance the involvement of specific user groups in technological innovation.
- Map user needs and user requirements for design, development, or implementation in relation to digital health innovation.
- Apply design-oriented and creative methods in co-creation with different actors.

COMPETENCES

- Lead user involvement for design, development, or implementation of digital health innovation projects.
- Reflect on and account for how the various forms of involvement of stakeholders and design methods frame new technological design.

TYPE OF INSTRUCTION

The teaching format is blended learning combining co-located seminars with self-study of both written material and video clips, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Design, Development and Implementation of Digital Technologies in a Healthcare Context
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Projektledelse af design-, udviklings- og implementeringsprocesser af digital sundhed
Module code	SOTDH24M1_2
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Eriksen

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

HEALTH AND SOCIAL SCIENCE RESEARCH METHODOLOGIES AND COMMUNICATION

2025/2026

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The goal is for the students to acquire knowledge and skills to support and understand scientific methods within both health sciences and social sciences. The students achieve this through insights into classic study designs and methods, as well as through structured coverage of selected research areas through systematic literature searches as well as critical reading and assessment of scientific literature.

The course focuses on methodological skills to address two aspects of design, development and implementation processes of digital health projects: 1) identification and exploration of complexity in different stages of the process and 2) investigation and framing of the importance of context for a specific digital health project. The course also includes a focus on the use of tables, figures, and other visualization techniques in the different phases of a digital health project.

LEARNING OBJECTIVES

KNOWLEDGE

- Can explain in detail classic study designs and methods within health sciences and social sciences research.
- Can independently explain the possibilities and limitations of different types of study designs and methods with reference to relevant quality criteria, cf. the choices made in a study.
- Can explain the principles of the research process in relation to the chosen scientific method(s).

SKILLS

- Can argue for connections between hypothesis or research questions, study designs, scientific method(s), and data.
- Can discuss scientific quality criteria, in general, as well as in relation to different scientific designs and methods.
- Can argue for and select relevant study designs for exemplified hypothesis or problem formulation.
- Can discuss the advantages and disadvantages of different methods for structured coverage of a research area through systematic literature search, as well as critical reading and assessment of scientific literature.
- Can communicate own research, both orally and in writing.
- Can discuss and critically reflect on the connection between research questions and the choice of research design and methods – in general and in relation to specific studies.

COMPETENCES

- Can reflect on and critically relate to the knowledge that can be produced with different social and health science designs and methods.

TYPE OF INSTRUCTION

This course focuses on scientific methodologies, supporting participants in handling different hypotheses, research questions, and approaches to designing, developing, and implementing digital health projects.

The teaching format is blended learning based on self-study of both written material and video clips, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Health and Social Science Research Methodologies and Communication
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Sundhedsvidenskabelige og samfundsvidenskabelige metoder og formidling
Module code	SOTDH24M1_3
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Louise Pape-Haugaard

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

DIGITAL HEALTH INNOVATION AND ORGANIZATIONAL CHANGE PROCESSES IN A HEALTHCARE CONTEXT

2025/2026

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module focuses on digital health innovations and organizational change processes in the healthcare sector, with the aim that students can independently identify and formulate a relevant challenge within digital health. The challenge should serve as a case for the student's exploration of aspects of organizational change and implementation processes related to digital health innovations in a healthcare context.

The students must identify and formulate a problem relevant within digital health innovations and the accompanying organizational change processes in the healthcare sector. The student must use insights, approaches and methods from the 3 modules on the 1rst semester to establish a relevant problem; initially explore the problem from different perspectives; describe the context relevant for the chosen problem; focus the problem formulation sufficiently to explore it with the chosen approach, design, and methods; and carry out the project in practice. The students must then write a project report and will have a supervisor to guide them and give feedback on content, theories, methods, and progress in writing the project report.

LEARNING OBJECTIVES

KNOWLEDGE

- Have knowledge about design and development of digital technologies in a healthcare context.
- Have knowledge about organizational change processes that center on digital technologies.
- Have knowledge about how to design, develop and implement digital technologies in a healthcare context.

SKILLS

- Can identify and document the need for digital technology.
- Can use relevant theories and methods in design and development of digital technologies.
- Can facilitate and implement technological innovations in a healthcare context.
- Can discuss and evaluate the implementation of digital technologies in the healthcare sector using relevant theories and methods.

COMPETENCES

- Can identify the knowledge necessary to develop, test and implement digital health technologies.
- Can evaluate the results of new digital health technology in clinical practice using relevant theories and methods.
- Can establish and carry out project collaboration with external partners relevant to the identified issue.

TYPE OF INSTRUCTION

The intention with the project work is to support the learning objectives. The teaching format is blended learning based on self-study of both written material, supervision, discussion in study groups and online status seminars.

EXAM

EXAMS

Name of exam	Digital Health Innovation and Organizational Change Processes in a Healthcare Context
Type of exam	Oral exam based on a project
ECTS	10
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Digital health innovationer og organisatoriske forandringsprocesser i sundhedssektoren
Module code	SOTDH24M2_1
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	10
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Birthe Dinesen

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

THE ECONOMICS OF DIGITAL HEALTH

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module builds on knowledge, skills and competences obtained in the course module: Innovation and Technological Change in a Healthcare Context or knowledge, skills and competences equivalent to this.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The module will have micro, macro – and policy-oriented themes, where students will assess the macro-economic impact of digital health, economics of regulation, innovation and development of digital health including AI. Also, methodologies for the cost-effectiveness analysis of digital health solutions, quality impact and value for money will be addressed.

LEARNING OBJECTIVES

KNOWLEDGE

- Differentiate and categorize different type of digital health applications
- Understand elements of national strategies for digital health
- Understand how digital health create societal value

SKILLS

- Engage in meaningful conversations about the health and economic impact of digital health on patient care
- Discuss the challenges of using health economics evaluation to digital health
- Identify relevant methods assessing the valuing health outcomes and costs of implementing digital health solutions

COMPETENCES

- Ability to critically interpret and evaluate economics evaluations of digital health solutions
- Undertake simple cost-effectiveness analysis of digital health

TYPE OF INSTRUCTION

The teaching format is blended learning based on self-study of both written material and video clips, discussion in study groups and online seminars.

Students are expected to identify specific digital health solutions and use these as example for applying the methodology for economic analysis.

EXAM

EXAMS

Name of exam	The Economics of Digital Health
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Anvendelse af sundheds- og velfærdsøkonomiske analyser
Module code	SOTDH24M3_1
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Jan Sørensen

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

ETHICS, HEALTH AND ARTIFICIAL INTELLIGENCE

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module builds on knowledge, skills and competences obtained in the course module: Innovation and Technological Change in a Healthcare Context or knowledge, skills and competences equivalent to this.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

When it comes to AI, the healthcare sector has its own set of unique ethical considerations concerning patient care, the sensitive nature of health data, and the critical impact on individuals and public health. From mobile health and fitness apps to wearables, from virtual reality to personalized medicine and digital (AI) therapists, various digital health applications utilizing AI are disrupting traditional models of healthcare delivery and changing the healthcare landscape. These digital health applications raise important ethical issues that impact their use, adoption, and deployment. As the integration of AI into medical technology and healthcare systems technology develops, the need for safety, soundness and fairness is required at all levels so that the regulatory systems (on which physicians and patients rely) ensure that healthcare AI is responsible, evidence-based, bias-free, and designed and deployed to promote equity. It is critical that AI in healthcare benefits all sectors of the population, as AI could worsen existing inequalities if not carefully designed and implemented.

LEARNING OBJECTIVES

KNOWLEDGE

- Knowledge of AI ethics in healthcare and how it differs from other fields.
- Knowledge of a range of existing and emerging AI-powered digital health tools in use and the relevant ethical considerations.
- Understanding of ethical considerations of AI and digital health tools and applications, such as data privacy (ownership of health records, patient history, and consent) and fairness across the individual, organizational, and societal levels.

SKILLS

- Identify ethical concerns at both the design and deployment levels.
- Assess the trade-offs, risks, and benefits of AI in digital health applications.
- Identify potential areas for ethical concern and risks, including safety and transparency, algorithmic fairness and bias, data privacy.
- Evaluate/assess privacy measures including informed consent and data privacy at the deployment level.
- Communicate the benefits and risks of AI in digital health applications.

COMPETENCES

- Apply ethical frameworks to AI-backed digital health tools to mitigate risks and ensure health equity and fairness at the deployment level.

- Synthesize and develop ethically informed strategies for deploying digital health tools with regard for their impact at the individual, organizational, and societal levels.

TYPE OF INSTRUCTION

This course focuses on providing the students with an understanding of ethical issues involved in using AI in healthcare and supporting them in handling such issues by working with their own case. The teaching format is blended learning based on self-study of both written material and video clips (or invited guest lectures, when possible). discussion in study groups and in plenum in physical and online seminars. It is organized as a mix of lectures and presentations followed by individual project work based on case-studies.

EXAM

EXAMS

Name of exam	Ethics, Health and Artificial Intelligence
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Etik, sundhed og kunstig intelligens
Module code	SOTDH24M3_2
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Elizabeth Jochum

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

USER STUDIES AND INFORMATION BEHAVIOR IN HEALTH

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module builds on knowledge, skills and competences obtained in the course module: Innovation and Technological Change in a Healthcare Context or knowledge, skills and competences equivalent to this.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This module will teach students how to study users and their interactions with information and IT systems in the health care sector. An understanding of user practice and information behavior is essential for successful implementation and evaluation of digital health systems. The module provides insight into theories and methods for analyzing and understanding digital practice in healthcare. This includes theories on practice and information behavior and different methods for data collection including both qualitative as well as data-driven approaches for understanding user practice at the individual, group and organizational level.

LEARNING OBJECTIVES

KNOWLEDGE

- Information behavior and digital practice in health
- Methods for mapping and analyzing information behavior and digital practice in health

SKILLS

- Collect and analyse data regarding information behavior and digital practices in healthcare
- Communicate and discuss information behavior and digital practices in health implementation and adoption with professionals and non-professionals

COMPETENCES

- Independently plan and conduct studies of user practices and behavior
- Participate in an interdisciplinary collaboration to solve problems related to user practice

TYPE OF INSTRUCTION

This course focuses on providing the students with an understanding of user interactions and information behavior. The course will be based on blended learning, a combination of physical attendance, online seminars, and group work. It is organized as a mix of lectures and presentations followed by individual project work based on students' own cases.

EXAM

EXAMS

Name of exam	User Studies and Information Behavior in Health
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Brugerstudier- og informationsadfærd indenfor sundhedsområdet
Module code	SOTDH24M3_3
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Skov

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

MACHINE LEARNING IN THE WELFARE SECTOR

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module builds on knowledge, skills and competences obtained in the course module: Data flow, Databases and Data Quality or knowledge, skills and competences equivalent to this.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

This course provides fundamental knowledge and skills in artificial intelligence, with a focus on machine learning techniques. The course offers students an understanding of basic concepts in AI and equips them with tools to work with machine learning systems. An important element is also to go through the entire machine learning process, from data preparation to model training, fine-tuning, and maintaining the finished system. By combining theory and practical exercises, a foundational knowledge in AI and ML will be built, serving as a basis to apply this knowledge in both health-related research and industrial contexts.

LEARNING OBJECTIVES

KNOWLEDGE

- Basic elements and structure of a machine learning system.
- How patterns can be described using features.
- Various health-related contexts and scenarios in which machine learning is involved.

SKILLS

- Can apply and evaluate basic supervised and unsupervised machine learning models.
- Can analyze, visualize, and select features.
- Can prepare data for training, validation, and testing of machine learning models.

COMPETENCES

- Can translate knowledge of features and basic AI models into the design, development, and evaluation of a simple AI system.
- Can assess the applicability of prediction and classification approaches in health care contexts.

TYPE OF INSTRUCTION

The teaching format is blended learning based on self-study of both written material and video clips, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Machine Learning in the Welfare Sector
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Machine Learning inden for sundhedsområdet
Module code	SOTDH24M3_4
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Østergaard

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

DECISION SUPPORT FOR CLINICAL PRACTICE

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module builds on knowledge, skills and competences obtained in the course module: Dataflow, Databases and Data Quality or knowledge, skills and competences equivalent to this.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The course introduces with examples the role of decision support and decision support systems in clinical practice. Simple tools for decision analysis are introduced with examples as well as how to identify important attributes for a decision problem and how to ascertain the preference structure of a decision maker for a given decision. The course then introduces the basic elements and structure of a decision support system followed by theoretical and practical introduction to various knowledge-based methods for decision support systems.

LEARNING OBJECTIVES

KNOWLEDGE

- Can account for basic elements and structure of a decision support system.
- Can account for and relate different methods for decision support system knowledge base.
- Can account with examples for the role of decision support systems in clinical practice.

SKILLS

- Can apply selected methods for visualizing a clinical decision problem.
- Can apply selected methods for identifying appropriate attributes and decision maker’s preferences for a decision problem.
- Can apply selected knowledge-based methods for decision support including rule-based methods, decision theory-based methods and model-based methods and Bayesian networks.
- Can apply selected methods for decision support system inference engine including forward/backward chaining, fuzzy inference, basic numerical optimization, and probabilistic inference.

COMPETENCES

- Can identify appropriate combination of methods for knowledge base and inference engine for a decision support system in relation to a clinical decision support problem.
- Can combine understanding of methods for knowledge base and inference engine to design, implement and evaluate a simple decision support system.

TYPE OF INSTRUCTION

This course focuses on the role of decision support systems in clinical practice and the software implementation of knowledge-based methods for decision support systems, supporting participants in handling development tasks in relation to clinical decision support systems.

The teaching format is blended learning based on self-study of both written material and video clips, working with exercises, working with software implementation of methods for decision support systems, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Decision Support for Clinical Practice
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	Passed/Not Passed
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Beslutningsstøtte til klinisk praksis
Module code	SOTDH24M3_5
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Karbing

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

STANDARDIZATION AND INTEROPERABILITY IN HEALTH CARE

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The module builds on knowledge, skills and competences obtained in the course module: Dataflow, Databases and Data Quality or knowledge, skills and competences equivalent to this.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

LEARNING OBJECTIVES

KNOWLEDGE

- Have knowledge of standards on information and communication models in health care.
- Have knowledge of terminology and semantics in clinical information systems from interface to database level.
- Understand use of clinical information for primary and secondary purposes.
- Have knowledge of different research approaches related to terminology and models in clinical information systems.

SKILLS

- Can apply appropriate methods for Information System development and research.
- Can analyze the need for terminology and classifications in a given clinical information system.
- Can choose and apply appropriate standards for a given clinical information system to create interoperability.
- Can discuss issues associated with primary and secondary use of clinical information.

COMPETENCES

- Can assess needs for the level of interoperability to solve different kind of problems in digital health.
- Are able to evaluate terminology and models in clinical information systems in regard to digital health.

TYPE OF INSTRUCTION

This course focuses on semantic interoperability and how to achieve this by applying appropriate standards and terminology. The module will be supporting participants in handling issues with reuseable data and information. The teaching format is blended learning based on self-study of both written material and video clips, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Standardization and Interoperability in Health Care
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Standardisering og interoperabilitet i sundhedssektoren
Module code	SOTDH24M3_6
Module type	Course
Duration	1 semester
Semester	Autumn
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Louise Pape-Haugaard

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

MASTER'S PROJECT

2025/2026

RECOMMENDED PREREQUISITE FOR PARTICIPATION IN THE MODULE

The Master's project builds on knowledge obtained during semesters 1-3.

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

Through interdisciplinary collaboration, digital health innovation is analysed and developed based on a scientific and/or practical problem.

LEARNING OBJECTIVES

KNOWLEDGE

- Understand the factors that influence the design, development and implementation of digital health solutions in the healthcare sector.
- Explain the use of digital health solutions in a concrete organizational context through insight into different methods.

SKILLS

- Identify a scientific or authentic problem through relevant empirical evidence.
- Identify and apply a relevant study design and method(s) in relation to identified scientific or authentic issues in relation to digital health.
- Critically apply relevant scientific methods and tools.
- Communicate the contribution of the student's own work relative to established knowledge in the specific research field
- Discuss the results of the project work, reflecting upon the quality of the work, i.e. limitation, boundary conditions, implications of the methods used.

COMPETENCES

- Demonstrate ability to assess, and contribute with, solutions to digital health issues based on scientific work.
- Discuss own contributions and results in relation to existing knowledge about design, development and implementation of a solution to a digital health challenge.
- Assess and reflect on the choice of methods in the project work in relation to the project's results.
- Able to independently take responsibility for own professional development and specialization.
- Able to independently initiate and facilitate collaboration within digital health and appoint relevant partners.

- Be able to navigate and control complex, unpredictable situations that require adaptation and innovation.

TYPE OF INSTRUCTION

In semester 4, the Master Project is the only study activity. In this problem-based project the students will analyze a focused scientific and/or practical problem and develop a solution that addresses the identified problem.

The results of the project work should be documented in a project report or a scientific paper. The project can be carried out in teams of up to 3 participants.

EXAM

EXAMS

Name of exam	Master's Project
Type of exam	Master's thesis/final project
ECTS	15
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	External examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Masterprojekt
Module code	SOTDH24M4_1
Module type	Project
Duration	1 semester
Semester	Spring
ECTS	15
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Louise Pape-Haugaard

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

INNOVATION AND TECHNOLOGICAL CHANGE IN A HEALTHCARE CONTEXT - USER PERSPECTIVE

2025/2026

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

In this course, the participants are introduced to models and theories on technological change, innovation, implementation, technology assessment and evaluation. The participants learn to apply and relate the models and theories to specific contexts and work practices with a focus on digital technologies. To facilitate active learning the course aims to include selected cases and the participants' work-related experiences. The course provides the participants with competencies that enable them to engage in future development, implementation, application, and evaluation of digital technologies actively and constructively. The course will be a combination of physical attendance, online seminars, and group work. The module is anchored within the Research Group for Techno-Anthropology & Participation, Department of Sustainability and Planning.

LEARNING OBJECTIVES

KNOWLEDGE

- Have knowledge of different technological innovation concepts, -methods, -tools, perspectives and -strategies within the digital healthcare area.
- Have knowledge of models on technology assessment, implementation, application, acceptance, and evaluation of digital technologies.
- Have knowledge of interdisciplinary approaches, user perspectives and the role of interactional expertise, digital/technological literacy when implementing new digital technologies in healthcare.

SKILLS

- Analyze the frameworks established by organizations, institutions and users' work practices that shape technological change and innovation in the healthcare sector when implementing digital technologies, including identifying connections and controversies between institutions, regulations, logics, paradigms and focal stakeholders like healthcare professionals, citizens, patients, and relatives.
- Apply and evaluate models and theories relevant to digitisation, digitalisation, digital transformation, and technological change.
- Analyze and describe contextual issues related to work practices and digital/technological literacy, based on relevant case studies.
- Apply relevant approaches to planning, executing, and managing technological change projects based on interdisciplinary collaboration and intermediary expertise.
- Apply relevant approaches to planning, executing, and managing technological change projects based on interdisciplinary collaboration, user involvement and interactional expertise.

COMPETENCES

- Discuss and assess stakeholders' and actors' perspectives and needs in innovation and technological change projects, including the perspectives and needs of healthcare managers and other decision-makers, healthcare professionals, citizens/patients/family members, technologies, and other relevant stakeholders.
- Apply, evaluate, and critically assess various tools and approaches used for planning and managing interdisciplinary technological change projects, and identify and engage relevant stakeholders in innovation processes.

TYPE OF INSTRUCTION

The teaching format is blended learning combining co-located seminars with self-study of both written material and video clips, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Innovation and Technological Change in a Healthcare Context - User Perspective
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Innovation og forandringsfacilitering på sundhedsområdet - brugerperspektiv
Module code	SOTDH24M2_2
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Eriksen

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine

DATAFLOW, DATABASES AND DATA QUALITY - APPLIED PERSPECTIVE

2025/2026

CONTENT, PROGRESS AND PEDAGOGY OF THE MODULE

The goal of the module is for the students to be able to relate critically to health data quality when health data is the foundation for decision-making, diagnosis and further treatment of patients and citizens or for research, e.g. epidemiological research. The students achieve this through analysis and treatment of problems with different data registration practices.

LEARNING OBJECTIVES

KNOWLEDGE

- Can understand how typical clinical data form the basis for decisions.
- Have knowledge of collection, including how different types of medical technology data are collected and processed.
- Have knowledge of NOSQL databases and their application area in the healthcare sector.

SKILLS

- Can assess the usefulness of data for clinical (quality) purposes.
- Can derive a basic IT architecture from a graphic or other description of architecture.
- Can present and argue for the connection between data quality and clinical issues.
- Can use SQL and must be able to build relational databases using a graphical tool.
- Can design and develop relational databases.

COMPETENCES

- Can assess the correlation between data quality and clinical issues.
- Can discuss consequences of errors in handling clinical data.

TYPE OF INSTRUCTION

The teaching format is blended learning based on self-study of both written material and video clips, discussion in study groups and online seminars.

EXAM

EXAMS

Name of exam	Dataflow, Databases and Data Quality - Applied Perspective
Type of exam	Written or oral exam
ECTS	5
Permitted aids	See semester description
Assessment	7-point grading scale
Type of grading	Internal examination
Criteria of assessment	The criteria of assessment are stated in the Examination Policies and Procedures

FACTS ABOUT THE MODULE

Danish title	Dataflow, -registreringer og -kvalitet i anvendelse af sundhedsinformationer - udviklerperspektiv
Module code	SOTDH24M2_3
Module type	Course
Duration	1 semester
Semester	Spring
ECTS	5
Language of instruction	English
Location of the lecture	Campus Aalborg
Responsible for the module	Louise Pape-Haugaard

ORGANISATION

Education owner	Master of Digital Health
Study Board	Study Board of Health and Technology
Department	Department of Health Science and Technology
Faculty	The Faculty of Medicine