UNIVERSITY OF APPLIED SCIENCES

Module Handbook

for the Master Program

Innovation Design (M.A.)

In the version of 01.02.2026

Attachment to the Study and Examination Regulations for the Master Program Technology & Management (M.Sc.)

M.A. Innovation Design

Module Handbook

for the program variants of 60, 90, and 120 Credit Points

Attachment to the Study and Examination Regulations for the M.A. Innovation Design 60, 90, and 120 Credit Points in the version of 01.02.2026.

In force from 01.02.2026.

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MID_01 | AI Technologies and Applications

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Annually	Grading:	graded

Prerequisites:	M_03.1
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Elective

Content

Artificial intelligence (AI) seeks to equip artificial systems with cognitive abilities such as learning, reasoning, and problem-solving. While AI is still an active field of research, more and more of the associated technologies are mature enough to find practical applications. While AI technologies bring a plethora of opportunities for the development of new products, they also come with unique challenges and limitations.

Students who study this module develop an understanding of and practical experience with the core technologies in AI, including their opportunities, challenges, and limitations. This understanding goes deep enough to enable students to select and evaluate technologies for a given problem or project. In addition to technical considerations, this also includes an understanding of the ethical and legal implications, as well as environmental, social, and economic sustainability.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand the field of AI and its main technologies
- Analyze AI technologies regarding their opportunities and limitations
- Select, evaluate and adapt suitable AI technologies for a given problem or product idea
- Evaluate the design dimensions of AI applications
- Judge the ethical and legal implications of AI technologies
- Evaluate the environmental, economic, and social sustainability implications of AI technologies

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “AI Technologies”, and a case study on “Design Dimensions of AI Applications”.

Course: AI Technologies

The course AI Technologies is an interactive learning format, which allows students to gain both theoretical knowledge as well as practical experience with AI technologies. Students who participate in this course learn how to select, evaluate, and adapt contemporary AI technologies. Learning materials and input provided by the educator is combined with interactive formats that build upon students' curiosity. Throughout the course, students can learn and collaborate together in groups. Regular sessions with the educator contribute to the exchange and reflection of learning progress.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Design Dimensions of AI Applications

Students are provided with a case study on Design Dimensions of AI Applications. The case study encourages students to follow a challenge-based learning approach, which requires students to critically analyze, evaluate, and adapt AI Technologies within the design context of an application. Students can work on the case study as individuals or in groups.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module "MID_01 | AI Technologies and Applications", students must pass both the assessment for the course "AI Technologies" as well as for the case study "Design Dimensions of AI Applications". The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_02 | Agile Engineering Management

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Annually	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Elective

Content

Creating real-world digital products is a collaborative effort which requires a team of experts to work together effectively and efficiently. It generally requires a cross-functional team of experts making complex engineering decisions to build a product that takes business requirements, the regulatory environment, ethical and cultural considerations, as well as other external factors into account, all while retaining a user-centric perspective. In addition to engineering roles, product teams include people acting in roles that focus on orienting the team, for example by focusing on how the team works together, aligning the team's priorities with those of the broader organization, and ensuring a user-centric experience . This module is about learning how to work together with engineers to develop a digital product.

Qualification Objectives

Students who successfully pass this module are able to:

- Organize engineering teamwork
  - Apply common methods of organizing engineering work, such as Agile and/or Kanban
  - Understand and apply methods of continuous delivery
  - Enable and empower engineering teams to build digital products
- Understand the engineering process of digital products:
  - Understand and apply a/the software development lifecycle
  - Distinguish amongst the various roles on a product team
- Evaluate and translate between business requirements, user experience, and engineering solutions
  - Evaluating non-functional requirements of the product and its features such as privacy, security, availability, and interplay between business models and feature development
  - Analyzing cost and complexity of various engineering solutions and trade-offs
  - Making data-driven decisions about product development
  - Analyze user experience design and feedback as a part of the feature definition process

- Evaluate technological solutions in terms of legal, ethical, and cultural considerations
    - Understanding and evaluating potential social and ecological impact of a product
    - Privacy & data protection attitude and law (locally, europe-wide, globally).

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Agile Engineering Management”, and a case study on “Design Requirements and Agile Engineering”.

Course: Agile Engineering Management

The course Agile Engineering Management is an interactive learning format, which allows students to gain both theoretical knowledge as well as practical experience with organizing engineering teamwork. Students who participate in this course learn to understand the engineering process of digital products. Learning materials and input provided by the educator is combined with interactive formats that build upon students’ curiosity. Throughout the course, students can learn and collaborate together in groups. Regular sessions with the educator contribute to the exchange and reflection of learning progress.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Design Requirements and Agile Engineering

Students are provided with a case study on Design Requirements and Agile Engineering. The case study encourages students to follow a challenge-based learning approach, which requires students to apply common methods of organizing engineering work within the design context of an application. Students can work on the case study as individuals or in groups.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module “MID_02 | Agile Engineering Management”, students must pass both the assessment for the course “Agile Engineering Management” as well as for the case study “Design Requirements and Agile Engineering”. The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_03.1 | Software Development Basics

Details

Credits:	5 ECTS-CP	Duration:	1 Semester
Contact time:	25 (2.1 SWS)	Self-study:	100
Frequency:	Every Semester	Grading:	Pass/Fail

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Elective

Contents

Software development constitutes the core element of the broader software engineering process. Whether software is constructed using generative AI technologies or by a team of engineers, proficient human developers remain indispensable to any software development project. In this module, students will learn the fundamental principles of programming. They will be introduced to industry professionals' tools and techniques. Additionally, they will learn to adhere to best practices such as version control and debugging.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand and use the basic features of programming languages
- Apply basic version control
- Use integrated development environments (IDEs)
- Debug and troubleshoot computer programs
- Understand programming-related terminology

Teaching and Learning Methods

This module consists of a course “Software Development Basics”, which allows students to gain both theoretical knowledge as well as practical experience with programming. The course is completed with an individual ungraded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_03.2 | Software Engineering Technologies

Details

Credits:	10 ECTS-CP	Duration:	1 Semester
Contact time:	50 (4.15 SWS)	Self-study:	200
Frequency:	Every Semester	Grading:	graded

Prerequisites:	M_03.1
Module Coordinator:	tbd
Teaching Format:	Course
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Elective

Contents

Contemporary technologies are predominantly driven by software. Products are developed, and challenges are addressed through the integration of software and hardware technologies.
In this module, students will explore a diverse array of technologies and software engineering methodologies. They will acquire the skills necessary to determine the most suitable approach for addressing specific problems. Additionally, students will be encouraged to critically assess the broader implications of various technologies on individuals (such as customers and team members), society, and the environment.

Qualification Objectives

Students who successfully pass this module are able to:

- Choose the appropriate software or hardware technologies for a given product requirement and judge emerging technologies
- Understand and choose the appropriate software architecture for a given product requirement
- Understand and describe software and hardware interfaces, such as APIs
- Understand internet and networking-related technologies to build connected software
- Gather and evaluate technology-related data and make data-driven decisions
- Judge the ethical and legal implications of varying hardware and software technologies
- Evaluate the impacts on economic, environmental and social sustainability of varying hardware and software technologies
- Understand the role of open-source licensing in technological development

Teaching and Learning Methods

This module consists of a course “Software Engineering Technologies”, which allows students to gain both theoretical knowledge as well as practical experience with software engineering. The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the

general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_04 | Strategic Technology Management

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Annually	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Compulsory Elective

Contents

New technologies do not just open up potentials for new products and features, they also change the way people work in teams and organizations. Digitalization has shifted the strategic focus of entire industries and created new categories of products as well as work environments. With generative AI, strategies for products and operations are entering digitalization 2.0, even before version 1.0 has been completed.
In this module, students take a strategic perspective on the integrated challenges and potentials of technologies for products and operations, with an emphasis on generative AI. The experience gained in this module enables students to implement technology-related design strategies in organizations of any size, while taking a holistic view on product opportunities and the people and processes involved in their creation.

Qualification Objectives

Students who successfully pass this module are able to:

- Create strategies for operationalizing AI within the organization.
- Apply agile methodologies to manage technology and product operations effectively.
- Evaluate and apply AI techniques to optimize operations and improve efficiency.
- Apply and evaluate market analysis and testing techniques to inform strategic decisions.
- Apply and evaluate competitor analysis methods to gain insights and maintain a competitive edge.
- Create clear value definitions to guide strategic planning and resource allocation.
- Apply, create and evaluate strategies for leveraging AI in design operations within their organizations.
- Create and evaluate design strategies for AI-driven products and services.

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Strategic Technology Management”, and a case study on “Applying AI in Design Operations and Strategies for Innovation”.

Course: Strategic Technology Management

In this interactive course, students explore the theoretical and practical aspCP of strategically utilizing emerging technologies - focusing on generative AI - for operational processes and product innovation. For the organizational aspCP, students learn how to select technologies and tools, implement them in agile working environments, and evaluate their adoption. For product-related aspCP, students learn to conduct in-depth analyses of markets, competitors, and customer segments, based on which they learn to create strategic initiatives for value creation. In course sessions, the lecturer provides resources and input, while students can learn collaboratively in groups. Reflection on learning outcomes is a key element throughout the course.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Applying AI in Design Operations and Strategies for Innovation

Students of Design are provided with a case study on Strategic Technology Management. The case study encourages students to follow a challenge-based learning approach, which requires students to apply, create, and evaluate ways to leverage AI in design operations and create design strategies for innovative products and services. Students can work on the case study as individuals or in groups.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module, students must pass both the assessment for the course “Strategic Technology Management” as well as for the case study “Applying AI in Design Operations and Strategies for Innovation”. The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_05 | Entrepreneurial Leadership

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Annually	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Elective

Contents

In today's world, team building, effective leadership, and entrepreneurial acumen are key elements driving innovation and organizational success. This module focuses on leadership, organizational development, and entrepreneurship. It offers unique opportunities to engage with the perspectives taken by successful founders and industry leaders. This includes non-hierarchical leadership philosophies and holistic views on teamwork and collaboration. In this module, students gain the experience they need to take on the role of a design-oriented, entrepreneurial leader in any organization, and to build highly performant teams driving the creation of valuable design solutions and experiences for customers and other beneficiaries.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand and apply principles of teamwork and collaboration to foster a productive work environment.
- Evaluate various leadership styles to adapt to different situations and team dynamics.
- Evaluate and apply self-leadership techniques to enhance personal effectiveness and growth.
- Understand and apply leadership skills within a team setting to guide and motivate others.
- Evaluate leadership strategies to drive business success and organizational growth.
- Evaluate leadership strategies to drive the success of design solutions and experiences, as well as the growth of the organization.
- Understand and apply innovations in leadership based on emerging technologies, such as generative AI.
- Understand and evaluate the key steps and considerations involved in starting a startup/innovation project from a design perspective.
- Evaluate and apply advanced entrepreneurship concepts to navigate complex challenges.
- Understand and evaluate specific strategies for launching and growing a startup.

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Entrepreneurial Leadership”, and a case study on “Applied Design Leadership”.

Course: Entrepreneurial Leadership

This course explores team building, teamwork and various leadership styles and their application in different contexts. Emphasis is placed on self-leadership techniques to foster personal growth and effectiveness, alongside strategies for guiding and motivating close-knit founding teams. Students will explore various skills and knowledge necessary to excel as leaders and entrepreneurs in diverse settings. Students will explore key steps and mis-steps that happen when starting a startup or innovation project, potentially connecting with first customers, and recruiting first investors/stakeholders. Strategies for using AI to improve the successful launch and growth of the project will also be explored. In course sessions, the lecturer provides resources and input, while students can learn collaboratively in groups. Reflection on learning outcomes is a key element throughout the course.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Applied Design Leadership

Students of Technology & Management are provided with a case study on Entrepreneurial Technology Leadership. The case study encourages students to follow a challenge-based learning approach, which requires students to evaluate and apply leadership strategies, creating the organizational potential to start a startup or innovation project from a design perspective and drive the success of design solutions and experiences. Students can work on the case study as individuals or in groups.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module, students must pass both the assessment for the course “Entrepreneurial Leadership” as well as for the case study “Applied Design Leadership”. The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_06 | Digital Marketing & Business Models

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Every Semester	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Elective	Elective

Contents

At a time when digital transformation and customer-centric adoption of emerging technologies are critical, marketing strategies and business models must evolve continuously to stay competitive. Building economically sustainable business models requires hypothesis-driven optimization methods and fast iteration cycles. Digital marketing strategies and tactics must work to constantly refine the positioning of their products in an ever-changing market of customer expectations. This module provides a holistic understanding of the intersection between digital marketing and business model development. Students gain the experience they need to create successful business models and digital marketing strategies that match the design strategy of their products and vice versa. They explore the utilization of emerging technologies, especially generative AI, to assist in optimizing business models and digital marketing strategies at the pace required by markets and societal and environmental contexts.

Qualification Objectives

Students who successfully pass this module are able to:

- Analyze and create effective positioning strategies to differentiate the company's offerings.
- Apply and evaluate digital marketing techniques to optimize marketing efforts and ROI, utilizing generative AI.
- Apply and evaluate omnichannel strategies to provide a seamless customer experience across channels.
- Understand and apply hypothesis-driven approaches to design innovative business models.
- Analyze and create robust business models to assess the viability of new ventures, based on an in-depth understanding of economics.
- Apply and evaluate techniques for operationalizing business models, utilizing generative AI technologies.
- Create and evaluate digital marketing strategies matching the design strategy of the company’s products.
- Analyze and iterate business models from the perspective of design strategy.

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Digital Marketing & Business Models”, and a case study on “Integrating Design Strategy with Digital Marketing & Business Models”.

Course: Digital Marketing & Business Models

This course covers, hands-on, the advanced tactics and frameworks essential for succeeding in the digital marketplace. Students explore the strategic application of digital marketing, including the integration of AI to enhance marketing initiatives in cost-effective ways that are aligned with the organization's brand. They apply positioning strategies, online marketing, and omnichannel approaches, ensuring a seamless customer experience across various platforms. They gain experience in methods of designing business models around successful products, across a broad range of contexts ranging from early-stage startups, to scale-ups, and innovation projCP in established companies. In course sessions, the lecturer provides resources and input, while students can learn collaboratively in groups. Reflection on learning outcomes is a key element throughout the course.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Integrating Design Strategy with Digital Marketing & Business Models

Students of Technology & Management are provided with a case study on Digital Marketing & Business Models. The case study encourages students to follow a challenge-based learning approach, which requires students to create and evaluate business models and matching digital marketing strategies from the perspective of design strategy. Students can work on the case study as individuals or in groups.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module, students must pass both the assessment for the course “Digital Marketing & Business Models” as well as for the case study “Integrating Design Strategy with Digital Marketing & Business Models”. The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_07 | Creating Future Vision and Form

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Every Semester	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Compulsory Elective	Compulsory Elective

Contents

In this design orientated module students will work on projCP within the arena of speculative design, design fiction, and design futuring. Applying Research Through Design (RTD) techniques and processes as a methodology for conducting extended design explorations.
Students will undertake activities aimed at exploring visual, tactile and spatial qualities of designs and new design materials and technologies applied to the digital products realm. Learning and applying interaction and visual gestalts, human factors, and ergonomic and spatial design techniques to exploratory prototype designs. This will include discussion and exploration of speculative and futuring techniques, aligning design processes and user needs and scenarios with current and future technologies.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand the application of and conduct extended projCP exploring future use scenarios. Including but not limited to prototype ideation and generation, evaluation and documentation, communication and dissemination and project management.
- Understand and apply common ideas and techniques from areas of the speculative, future and exploratory design arena
- Select and apply appropriate methodologies and techniques for generation, utilization and evaluation of prototypes of differing fidelities
- Understand, investigate and evaluate new technological innovations
- Evaluate and apply different materials, materialities and technologies as they may apply to the exploration of prospective future design scenarios.
- Understand and describe common visual and cognitive gestalts as they apply to interactive digital systems.
- Ideate upon, compare and evaluate different modalities and forms of interfaces suitable for differing proposed design contexts
- Understand and apply Research through Design techniques where appropriate in a futuring design process.

- Identify design opportunities within future technologies in the context of new user engagements and experiences.

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Creating Future Vision and Form”, and a course on “Creating Future Vision and Form for Design Students”.

Course: Creating Future Vision and Form

In this course, students learn about future vision and form. Case material is made available.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Course: Creating Future Vision and Form for Design Students

In this course, students explore future vision and form with applicability within a digital design arena. Students deepen their understanding in self-study with support from faculty, for which case material is made available.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module, students must pass both the assessment for the course “Creating Future Vision and Form”, as well as for the course “Creating Future Vision and Form for Design Students”. The overall grade of the module results from the weighted average of the grades of both courses, with the course “Creating Future Vision and Form” being double-weighted and the course “Creating Future Vision and Form for Design Students” being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_08 | Leading with Design

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Annually	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Compulsory Elective	Compulsory Elective

Contents

This course aims to equip students with the skills and knowledge to lead design-oriented services. Students will build a holistic perspective of leading with design, where decision-making involves balancing conflicting interests of different natures, including users' needs and expectations, business strategies, and technological and operational constraints.

Students will address the core values of the service being designed, stakeholders' constraints, usability and accessibility of touchpoints, and feasibility of the service from both technical and business perspectives, fostering a risk-taking culture to produce impactful design solutions that drive both profit and social value.

Students will focus primarily on collecting users' requirements in design workshops, ensuring that users' needs, interests and expectations are properly validated and communicated as prototypes, and valued in decision-making processes.

To exercise decision-making and empathy-building with users and stakeholders, students will engage in user-centred design activities alternating their role as the design leader or role-playing as different stakeholders and users, critically adding constraints and questioning the validity and efficiency of others' service.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand and apply design methods and tools, including user journey maps, stakeholders' constraints and blueprint
- Design and evaluate variations of a service, justifying design decisions on user requirements
- Identify, address and prioritize users' constraints that influence decision-making in a service design
- Critically evaluate the potential of a service in driving impact and business
- Elaborate stories and create prototypes to communicate different design perspectives

- Plan and facilitate user-centered design workshops as a design leader

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Leading with Design”, and a case study on “Leading with Design for Design Students”.

Course: Leading with Design

The course combines educator-provided materials with interactive sessions that foster collaboration and creativity among students. Throughout the course, students work together in groups to explore and address real-world challenges. Regular sessions with the educator facilitate the exchange of ideas and reflection on learning progress.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Leading with Design for Design Students

Students engage in a case study leading the design of a fictional or real-life service with a user-centered approach. Students can work on the service design in groups or individually, but engagement with other students as participants in their design or evaluation activities is essential.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module, students must pass both the assessment for the course “Leading with Design”, as well as for the case study “Leading with Design for Design Students”. The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_09 | Designing with People

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Annually	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course; case study
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Mandatory	Mandatory	Mandatory

Contents

Students who undertake this module will explore the transformative role of design in fostering social innovation and sustainability. The role of the designer has shifted to being a facilitator and catalyzer of the creative process, helping to bring ideas to fruition by working collaboratively with various stakeholders (Manzini, 2015) within a local context.

Students will investigate how design can address complex social challenges by empowering communities, fostering collaboration and creating resilient systems. The module has a focus on co-design practices, developing local responses to global problems, and the role of designers as facilitators in the social innovation process.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand and articulate the principles of design for social innovation.
- Critically analyze the role of design in addressing societal challenges.
- Prototype context-specific sustainable design solutions that respond to local issues (within a global context).
- Critically and constructively evaluate the collaborative design work of peers through a human/user experience lens.
- Apply diverse ways for creative problem-solving with a design mindset
- Understand and apply Human-centered design in a social innovation context
- Reflect on the ethical and practical implications of design interventions in diverse social contexts.
- Evaluate the social impact of a design, taking the psychological aspCP of stakeholders into account
- Select and apply co-design methodologies to engage stakeholders, particularly users, in the design process.

Teaching and Learning Methods

This module consists of two compulsory parts: a course on “Design for Social Innovation”, and a case study on “Design for Social Innovation for Design Students”.

Course: Design for Social Innovation

The course "Design for Social Innovation" is an interactive learning format that enables students to acquire both theoretical insights and practical experience in applying design principles to address societal challenges. Participants learn to articulate the role of design in social innovation, prototype sustainable solutions, and evaluate design work through a human/user experience lens. The course combines educator-provided materials with interactive sessions that foster collaboration and creativity among students. Regular meetings with the educator facilitate the exchange of ideas and reflection on learning progress.

The course is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Case Study: Design for Social Innovation for Design Students

Students engage in a case study focused on leading user-centered design workshops. This challenge-based approach encourages students to create, communicate, and evaluate service prototypes using diverse design strategies. Students can work individually or in groups to explore innovative design solutions.

The case study is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Grading

In order to pass the module, students must pass both the assessment for the course “Design for Social Innovation”, as well as for the case study “Design for Social Innovation for Design Students”. The overall grade of the module results from the weighted average of the grades of the course and the case study, with the course being double-weighted and the case study being single-weighted.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform, e.g.

- Manzini, E. (2015). *When Everybody Designs: An Introduction to Design for Social Innovation*. MIT Press.
- Brown, T., & Wyatt, J. (2010). Design Thinking for Social Innovation. Stanford Social Innovation Review.

MID_10 | Digital Product Development

Details

Credits:	15 ECTS-CP	Duration:	1 Semester
Contact Hours:	75 (6.25 SWS)	Self-study Hours:	300
Frequency:	Every Semester	Grading:	Pass/Fail

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Project work
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Elective	Mandatory	Mandatory

Contents

This module immerses students in the dynamic process of digital product development through collaboration based on the Double Diamond Framework. Forming diverse teams to create their own digital product, students gain a holistic understanding of digital product development, covering desirability for users, technical feasibility, market viability as well as economical, social and environmental sustainability and regeneration.

Based on a critical analysis of customers, market, external factors and competitors they identify a unique selling proposition (USP). This is used as a foundation to create a product concept and to define an MVP that stands out.

The hands-on experience fosters innovative thinking, strategic planning, effective communication, and cultivates a user-centric mindset that is invaluable in any professional setting. These skills enable students to create successful products in any role or industry.

Qualification Objectives

Students who successfully pass this module are able to:

- Understand the various roles involved in product development and the Double Diamond Framework.
- Analyze customer needs, market conditions, external influences, and competitors to identify a unique selling proposition (USP).
- Evaluate user needs, technical feasibility, financial requirements, impacts on social and environmental sustainability, as well as the market potential of a product idea.
- Create a cohesive product concept collaboratively.
- Apply essential tools and methodologies to define a user-centric Minimum Viable Product (MVP).
- Create a well-structured pitch deck to present key findings of the analysis, the product concept and the definition of the MVP.

Teaching and Learning Methods

This module consists of a project “Digital Product Development”, with the goal to create a product concept and to define an MVP that stands out. The module is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_11.1 | Science Technology Society: Research and Writing Skills

Details

Credits:	5 ECTS-CP	Duration:	1 Semester
Contact Hours:	25 (2.1 SWS)	Self-study Hours:	100
Frequency:	Every Semester	Grading:	Pass/Fail

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Course
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Mandatory	Mandatory	Mandatory

Content

This module prepares students for conducting independent research in the context of a thesis. This includes academic standards and academic writing as well as fundamental premises of scientific inquiry. Working toward those competences, students need to understand what knowledge is, and how it is created and organized. This includes fundamental questions of the theory of science as well as research methodology and the use of state of the art tools and methods for secondary and primary research.

Qualification Objectives

Students who successfully pass this module are able to:

- Produce academic writing at an adequate level for a masters thesis
- Organize thoughts and findings in a structured way
- Understand questions of rationality, truth, and scientific inquiry
- Understand research methodology and terminology
- Systematically find, evaluate and systematize state-of-the-art research
- Utilize appropriate research tools and technology

Teaching and Learning Methods

This module consists of a course “Research and Writing Skills”. The module is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform

MID_11.2 | Science Technology Society: General Knowledge and Thinking

Details

Credits:	10 ECTS-CP	Duration:	1 Semester
Contact Hours:	50 (4.15 SWS)	Self-study Hours:	200
Frequency:	Every Semester	Grading:	graded

Prerequisites:	none
Module Coordinator:	tbd
Teaching Format:	Seminar
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Mandatory	Mandatory	Mandatory

Content

This module confronts students with the world outside their field of study, especially where that world is directly or indirectly affected by their work. It focuses on the impact and cultural context, as well as anthropological and ethical implications of digital technology, product design and management. In order to achieve this focus, the module must essentially work interdisciplinarily and includes basic ideas from philosophy, psychology, economics, political science, law and digital policy making.

In an era where fundamental social change is and can be driven by digital technology, it is essential to both understand those technologies, as well as the non-technological world they interact with. Students need to understand, for example, distributed ledgers and financial market regulations, software infrastructure and its geopolitical implications, or large language models and the human condition.

The one competence this module ultimately educates for is making good judgements. Good judgment requires knowledge as well as thinking. This defines the mode of teaching, the expectations to self-study, as well as assessment.

Qualification Objectives

Students who successfully pass this module are able to:

- understand current digital technologies and judge their impact on society
- understand basics of digital policy and regulation
- understand systemic contexts of decision-making and related suffering in the world
- understand more about human psychology, politics and society, esp. in relation to their professional fields
- understand how to work with concepts on a most general level (="thinking"), including argumentation, structure, and clarity.

- increase Self-awareness and Self-understanding

Teaching and Learning Methods

This module consists of a Seminar “General Knowledge and Thinking”. The module is completed with an individual graded assessment. The assessment format, in accordance with the formats specified in §12 of the general Study and Examination Regulations, is communicated at the beginning of the semester via the learning platform of the university.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.

MID_12 | Master Thesis

Details

Credits:	15 ECTS-CP	Duration:	n.a.
Contact Hours:	10 (0.5 SWS)	Self-study Hours:	365
Frequency:	Every Semester	Grading:	graded

Prerequisites:	none
Module Coordinator:	n.a.
Teaching Format:	n.a.
Assessment Type:	Oral/practical examination; written examination

Module Applicability

	60 ECTS-CP Study Program	90 ECTS-CP Study Program	120 ECTS-CP Study Program
Applicability	Mandatory	Mandatory	Mandatory

Content

The Master Thesis Module enables students to do independent research with a single, in-depth research project. It enables students to demonstrate an ability to use advanced concepts and to apply material learnt in other components of the degree programme. Part of the deliverables has to be a thesis on master level, but the module can also include substantial work in the form of a project. If the module includes such work, all work and learning achieved by the student must be documented in a way that allows reliable assessment. Projects are chosen from staff suggestions or are developed from the student's original idea.

Qualification Objectives

Students who successfully pass this module are able to:

- conduct an in-depth exploration of advanced concepts in their field of study
- carry out independent work on a substantial individual research project, including prioritization of different components of the project, as well as prioritizing the project as a whole against other work
- systematize and communicate results of an in-depth research project

Teaching and Learning Methods

Individual consultation.

Learning Resources

The latest and continuously updated learning resources for this module are available on the CODE learning platform.