STUDY PROGRAM
INTERACTIVE MEDIA (Bachelor of Arts)

Module Human and Machine

Teaching Subject: Physical Interfaces

Credit points: 8
Contact hours: 6

Modul contents

Students test their basic knowledge of conceptual, design and technical aspects on physical interfaces and hybrid artefacts. Established concepts are transferred into scenarios and made tangible through prototypes in order to evaluate potential areas of application in the respective context. The ability to critically analyse one's own designs is trained, as is the ability to engage in discourse in topic-specific fields.
Topics: Hybrid artefacts, physical and multisensory interfaces, human-machine collaboration and communication, Internet of Things, embodied interaction, sensory substitution and augmentation, code and material, prototyping, narration and design fiction
The course takes place within a subject area to be defined by the lecturer. Students are given the opportunity to independently determine their own thematic focus.

Learning/qualification objectives:

Knowledge:

- Knowledge of relevant technological developments and theoriesin the interaction design of physical interfaces andhybrid artefacts
- Basic knowledge of the design of multisensory interfacesfor human-machine communication and collaboration
- Experience in scenario building and various prototyping method strategies: Fast & paper prototyping, Wizard of Oz, high fidelity prototyping

Skills:

- Independent designs can be transformed into concrete scenarios.scenarios.
- Relevant technologies can be used prototypically in iterative design processes.
- Results can be presented and staged.

Competences:

- Potential areas of application can be evaluated and be evaluated and reflected upon in the respective context.

- The effects of technological developments on people and the environment can be made tangible through artefacts.
- Development of argumentative and discursive skills for learning/qualification for thetransdisciplinary dialogue with related disciplines.

STUDY PROGRAM
Creative Engineering (Bachelor of Arts)

Module Integration

Teaching Subject: Systems

Credit points: 10
Contact hours: 6

Modul contents

In the "Systems" module, system approaches are analysed in depth, whereby a system can be thought of technically or conceptually. Analytical and digital approaches are brought together and scrutinised with regard to their individual context and benefits. Using a transdisciplinary methodology, systems are evaluated, approaches are developed and prototypical implementations are carried out based on a framework topic and under co-educational supervision.
In the module:

- existing systems are analysed and evaluated
- terminologies, approaches and methods from design and engineering are brought together - qualitative methods are familiarised with and applied (observation, questioning, surveys)
- influencing factors are systematically identified and evaluated
- systems are explored, adapted and transformed
- approaches to results are developed, which are prototyped using technical or conceptual models (e.g. media installations)

Learning/qualification objectives:
Knowledge as an overview of:

- Deepen and apply systems thinking
- Evaluate suitable system interventions

Skills in the basic application of:

- Fundamentals of project management (classic + agile)
- Presentation methods

Competences as problem-solving skills with regard to

- team-based realisation of conceptual or technical prototypes
- Linking mechanical and virtual approaches

STUDY PROGRAM
Creative Engineering (Bachelor of Arts)

Module Integration

Teaching Subject: Environment

Credit points: 5
Contact hours: 4

Modul contents

In the Experience Lab, physical and media interfaces as well as interactive systems and prototypes are created and evaluated. The aim is the deconstruction, construction and intended reuse of multimodal artefacts. The Experience Lab module aims to provide students with basic knowledge, skills and competences in the field of exploring and designing experiences of new, sustainable contexts, concrete living environments and singular situations and scenarios. Particular attention is paid to taking into account and integrating the experiences of different actors in a wide variety of contexts of impact.
in the various contexts in which a product, service or system operates. To this end, it is also relevant to seek the experience perspective beyond a purely user- or human-centred approach at the level of non-human actors and to experimentally concretise unusual but future-oriented design approaches from this unorthodox experience space. Realism and practical relevance are realised at a high level through work in real laboratories.
Reflection and exemplary exploration of:
- Design, utilisation, conversion as an open process
- Improvisation and bricolage
- Manipulation, manual, mechanical and industrial processing industrial processing
- Abstraction and sensuality as well as transparency and opacity
- Statics and dynamics of designed systems
- Dimensions of functionality and dysfunctionality
- Control loops, feedback loops, achievements
- Letting be and perceiving

Learning/qualification objectives:

Knowledge as an overview of:
- aesthetic functions
- Research methods of design
- describe the term experience and its concepts in the in the context of the experiences and needs of different actors in a holistic impact contextResearch different stakeholders and

anticipate and shape their experiences in the context of a design, product or service. differentiate between different groups of actors and stakeholders and take into account their direct or indirect participation and involvement in the context of a design change.
- analyse touchpoints, create customer journey maps and describe personas.
- know the "real-world lab" method as a background for researching, designing and testing innovative experiences and use it on a small scale.
- describe suitable techniques for designing experiences and select them for a specific task.
- conducting simple usability tests and evaluating the user-friendliness of experimental prototypes and environments from the perspective of various stakeholders.
- Conception of touchpoints, user interfaces and interaction elements based on various experience studies.

Competences as problem-solving skills with regard to:
- Conception of transmedia storyworlds
- Conception, realisation and documentation ofinstallations
- identifying the experiences and needs of different stakeholders and integrating them into the design of products and services.
- The objects of design through the creating an unorthodox space of experience to analyse and specify.
- on this basis, to develop conceivable, but not necessarily obvious design approaches that are conceivable, but not necessarily obvious, and to make them tangible in prototype form for various players.
- to work in real-world laboratories and apply the acquired knowledge and skills in practice in order to develop innovative sustainable solutions that meet the requirements of various stakeholders.

STUDY PROGRAM
INTERACTIVE MEDIA (Bachelor of Arts)

Module Human and Machine

Teaching Subject: Interaction Design

Credit points: 8
Contact hours: 6

Modul contents

Interaction design according to usability aspects:

- Using a concrete example, media-specific particularities and specific features of the preparation of content for interactive presentation formats and compare them with other forms of presentation.
- Students prepare individual elements and navigation aids, develop various interaction structures and evaluate them.

Learning/qualification objectives:

Knowledge:

- Students are aware of the framework conditions, requirements and principles for designing interactive media. These have been tried out and applied in practice in an example project.

Skills:

- The students have practised preparing and structuring a given and structure a given subject area according to the medium and design a user interface.

Competences:

- Students understand the specific qualities of linear
and interactive forms of presentation and know how to use them in a targeted manner.

STUDY PROGRAM
INTERACTIVE MEDIA (Bachelor of Arts)

Module Team Project

Credit points: 20
Contact hours: 6

Modul contents

- Teamwork and team management
- Conception of a team project
- Technical and creative planning of the project
- Technical and creative realisation of the project - Documentation of the project
- Presentation of the project

Learning/qualification objectives:

Knowledge:

- In-depth knowledge in the subject area of the project

Skills:

- Further development of creative and/or technical skills
- Research methods- Documentation of a project
- Presentation of a project

Competences:

- Development of a topic or research question
- Constructive, productive and independent workin a team
- Planning a complex technical system

STUDY PROGRAM
Creative Engineering (Bachelor of Arts)

Module Integration

Teaching Subject: Environment

Credit points: 10
Contact hours: 6

Modul contents

In the "Environment" module, ecological, cultural, social, technological and economic aspects of systems are analysed. In this module, systems are understood as the integration of technical systems and services into comprehensive services. When developing and analysing the services, students focus on the process that is designed or perceived by different stakeholders. The entire life cycle of the system/service is analysed. The seminar has a transdisciplinary approach and is conducted on a co-educational basis.
Reflection and exemplary exploration of:
- Service design
- Structure and process modeling of services and prototypes
- Approaches to stakeholder analysis
- Service tests/customer journey
- Rapid prototyping and enactment
- Technical environment analysis

Learning/qualification objectives:

Knowledge as an overview of:
- Identify possible influencing factors on services and the development of services
- Justify the procedure for analysing a service

Skills in the basic application of:
- Applying structured methods for analysing the environment throughout the entire life cycle of a service
- Mapping a service process for the transdisciplinary consideration of a service

Competences as problem-solving skills with regard to
- Designing a comprehensive service
- Analysing stakeholders and the environment of a service and evaluating the influence on service development and the service