

# Winter Semester 2026/27

## **course descriptions**

1.compulsory international courses

2.product design courses

3.interaction design courses

4.communication design courses

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## compulsory international courses

### German Class

**teacher:** Carol Battista

**ECTS:** 2

**Course content:**

German language basics pursuant to A1 level (or A2 for students with prior knowledge) as well as specific university/survival vocabulary (Course may need to be split into 2 groups depending on previous levels)

**Learning goals**

Orientation to Schwäbisch Gmünd and German culture.  
Expansion of previous knowledge of German for intermediate students.  
Introduction to basic German (A1) and “survival “ German

### Laboratory Week

9.-13.11.2026

**ECTS:** 2

**Course content:**

The Laboratory Week offers students the opportunity to step out of the regular lecture schedule for one week and engage intensively with a specific topic. For this occasion, HfG Schwäbisch Gmünd invites guest lecturers each offering a five-day workshop or seminar.

During this week, all regular classes are paused. Instead, students work in small groups and focus on a shared project or thematic exploration. Participants include students from semesters 2–6 across all three study programmes at HfG Schwäbisch Gmünd: Interaction Design, Communication Design, and Product Design.

Before the week begins, students can choose their preferred course. The resulting groups typically consist of students from different semesters and disciplines. This interdisciplinary mix is highly valued, as it often leads to new perspectives, collaborative learning, and unexpected outcomes.

The Laboratory Week concludes with a small exhibition in which the results and processes from the workshops are presented. This exhibition offers an opportunity for students and lecturers to share insights from the different courses and to reflect on the work produced during the week.

# Presentation Skills Workshop

**teacher:** Tanya Matefi

**ECTS:** 2

## **Course content:**

The purpose of this workshop is for participants to practice various techniques, as well as develop self-confidence, in order to make successful presentations by practically making several presentations for a “built-in” audience, while receiving feedback and tips from the trainer and the other participants.

In a safe and positive environment, participants can overcome their inhibitions and practice making different kinds of presentations. Individual presentations, team presentations, improvised and prepared presentations.

The workshop has intense sessions, with many improvised presentations, followed by a break in which participants have time to work on prepared presentations. Students are encouraged to film their presentations for the purpose of self-assessment and reflection.

## **Learning Goals:**

1. To learn and practice good communication skills and public speaking techniques in order to confidently make effective and memorable presentations.
2. To develop self-confidence in presenting, overcoming inhibitions and practice and implement relaxation techniques to overcome presentation anxiety.
3. To learn and practice optimal ways to prepare and make individual and group presentations.

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## product design courses

### Product Design 2A

**teacher:** Andreas Hess

**ECTS:** 6

**Max. number of participants:** 3

**Course content:**

#### **Escaping Emergency Situations**

Whether in a subway, bus, tram, car, train, or cable car—wherever we occupy enclosed spaces—emergency situations can arise due to power outages, collisions, fires, panic, natural disasters, or derailments. This means we need to get outside quickly: opening a window or door, cutting a seatbelt, or breaking a pane of glass or a door to reach safety and escape the danger.

Tools such as emergency hammers, seatbelt cutters, rescue ladders, and fire axes assist in this process; these are available through accessory retailers or are freely accessible in public transport settings (buses and trains). Often, the designs of these products have remained unchanged for decades, deriving from simple archetypes. They are stowed in glove compartments or hung on walls for easy access, yet they are frequently impossible to locate during an emergency, difficult to remove from their mounts, and fail to blend into their surroundings while remaining visible.

Examine the contexts where a product can facilitate emergency escape, analyze the necessary escape processes, and consider both the user and their needs alongside the environment in which these events occur.

Design and develop a genuine emergency aid product that helps the user escape an emergency situation, integrates logically into its environment, is quickly and intuitively recognizable and usable, and goes beyond being a mere utility to emotionally engage the user or planner. Across both private and commercial applications, key factors include user-centricity, speed, cost, comfort, ease of use, material efficiency, and an emotional appeal—elements that convince the user and ensure relevance in both social and situational contexts.

The concept may be developed for either private or commercial use. The product is intended to meet all everyday demands and set a benchmark for sustainability and innovation in terms of manufacturing, usability, material efficiency, ergonomics, and emotional appeal. Through its formal and functional emotional resonance, the product system should convince users that their purchase decision was the right one and be far more than just a utilitarian necessity. It should integrate naturally and positively into its environment, allow users to identify with it, account for the phases before and after actual use, and become a valued, natural part of everyday life.

#### **Key Criteria**

The course aims to have students manage all phases of a design project—regarding both schedule and content—just as a real-world project involving a client and service provider would require. All necessary project steps must be executed and presented in a way that emotionally engages the client, provides comprehensive information about the concept, and enables long-term business decisions based on that information. Evaluation criteria include adherence to deadlines, focus on the project brief, creative approach, consumer focus, social relevance, visualization, functional development, technical feasibility, formal detailing, and the quality of the presentation.

#### **Assessment**

Assessment is based on three prototypes and the final presentation.

## **Project Timeline**

01 Initial meeting to discuss the topic and answer questions

02 Creative sprint: generate at least 20 ideas and concepts using various media (sketches, mock-ups, mood boards, etc.) without prior research

03 Become an expert: research, collect, and organize products and systems within this subject area

04 Assessment. Present an overview of the products found, including an evaluation

05 Conceptualization and idea development process—using sketches, mood boards, and mockups to develop concepts—with a strong focus on uniqueness, meaningful functionality, and integration into the environment

06 Presentation of your chosen concept, including a clear rationale for its selection  
Prototype 01 (to be graded and exhibited)

07 Design detailing process: CAD, ergonomics, and mockups to define the concept and styling

08 Design detailing process: CAD, ergonomics, and mockups to define the concept and styling

09 Presentation of your detailed concept and design; design freeze  
Prototype 02 (to be graded and exhibited)

10 CAD, prototyping, color & trim, preparation for the final presentation

11 CAD, prototyping, color & trim, preparation for the final presentation

12 CAD, prototyping, color & trim, preparation for the final presentation  
Prototype 03 (to be graded and exhibited)

13 Final presentation

## **Process Design 1**

**teacher:** Prof. Leif Huff

**ECTS:** 7

**Max. number of participants:** 6

**Course content:**

### **Designing Sustainable Cleaning Processes in Public Spaces**

Collaborative Project with Kärcher

The mobility transition is fundamentally transforming our city centers. Former traffic areas are being converted into cycle paths, pedestrian zones, parklets, and small green urban spaces. This is creating increasingly small-scale urban structures with new requirements for care, maintenance, and cleaning.

While these spaces are becoming more attractive for people, professional cleaning service providers and municipal authorities are facing a new challenge: conventional multi-ton street sweepers were designed for wide roads. They are often too large, too loud, and insufficiently

maneuverable for narrow cycle paths, landscaped recreational areas, and sensitive urban environments. At the same time, manual tools alone can no longer meet the growing demands for efficiency, ergonomics, and sustainability.

This creates a new scale of urban maintenance between the broom and large municipal vehicles: Urban Micro-Maintenance. This represents a new market opportunity for Kärcher. The course examines this development from a process-oriented design perspective. The focus is not on individual vehicles or products, but on sustainable systems consisting of people, tools, modular cleaning units, digital services, and workflows. The aim is to understand cleaning as a process that can be actively designed and to develop new strategies for maintaining the urban spaces of the future.

The project is carried out in cooperation with Kärcher and combines Human-Centered Design, systems thinking, and sustainability strategies with the development of future-oriented process concepts for public spaces.

The project will be completed in teams. Teams should consist of no more than four students. The project is available to international students, and the course may be taught in English.

## **Project Structure**

### **Phase 1 – Research: Understanding Urban Micro-Maintenance**

The project begins with observations and analyses of existing cleaning and maintenance processes in public spaces. Using Human-Centered Design methods such as interviews, shadowing, stakeholder analysis, and system mapping, students investigate workflows, use contexts, and the challenges associated with small-scale urban infrastructures. Following a structured synthesis process, students develop user insights and identify relationships within the broader system. Based on these findings, they define opportunity areas and formulate a clear design question.

#### **Outcomes:**

- User insights – key user needs
- Stakeholder and system analyses
- Process and use scenarios
- Identified pain points and opportunities
- Opportunity areas
- A clearly formulated design question (“How Might We...?”)

### **Phase 2 – Concept Development: Designing Urban Processes**

Building on the research findings and the design question, students develop systemic concepts for Urban Micro-Maintenance. Process design tools such as experience maps, service blueprints, process diagrams, and lifecycle perspectives support the development of sustainable cleaning processes. The concepts may include hardware product concepts, digital interfaces, service concepts, work organization, or partially automated processes. The aim is to develop a coherent system that meaningfully connects people, technology, and infrastructure while effectively supporting workflows in the field of Urban Micro-Maintenance.

#### **Outcomes:**

- System and process concepts
- Product-service systems
- Process and service blueprints
- Hardware and interaction concepts
- Initial functional and use scenarios
- A well-founded overall concept serving as the basis for further development

### **Phase 3 – Concept Refinement and Visualization: Making Processes and Interventions Visible**

A storytelling sprint marks the transition into the refinement phase. Students finalize their design concept and develop suitable forms of communication to clearly convey the proposed processes and solutions. Depending on the focus of the project, outcomes may include system models, CAD models, physical models (1:1 and scale models), interface prototypes, process visualizations,

service blueprints, or cinematic and graphic scenarios. The project concludes with a presentation and exhibition of the developed concepts.

**Outcomes:**

- Final process and system concept
- Fully developed design model (digital and/or physical)
- Process and system visualizations
- Communication and storytelling concept (renderings and, where appropriate, video)
- Presentation and exhibition contribution

## Product Design 4 (linked with Sustainability 4)

**teacher:** Prof. Leif Huff

**ECTS:** 7

**Max. number of participants:** 6

**Course content:**

**“Sustainability Studio” – Objects for Everyday Living**  
RE:DESIGN What Should Stay? What Must Change?

**Design Brief**

Great design objects can teach us a great deal. Their quality often lies not only in their form, but in the way purpose, material, construction, production and use come together.

In this project, students begin with an existing design object. A selection of well-known and lesser-known objects from different periods of design history provides the starting point. Each student or team of two selects one object and investigates it in detail.

The objective is not to simply reproduce the original or make it appear more contemporary. Instead, students will first understand why the object works, identify the qualities worth preserving, and then explore how it might be reinterpreted under changed technological, environmental, social and economic conditions.

The central question throughout the project is: What should stay? What must change?

Sustainability is not treated as an additional feature or a predefined outcome. It becomes a way of questioning design decisions throughout the project.

**Project Process**

**1. Discover**

Every project begins with the careful analysis of an existing object. Students investigate its history and original context, purpose and use, materiality, construction, manufacturing processes, assembly, maintenance and repair. Where possible, objects are examined physically, measured, disassembled, reconstructed or studied through drawings and models. Particular attention is given to understanding the design quality of the original:

- What makes this object relevant?
- Why has it endured?
- What makes its construction intelligent?
- What should not be lost in a redesign?

The aim is to identify the object's Design DNA and distinguish between qualities that should be preserved and assumptions that can be questioned.

Output: A concise analysis defining

KEEP – What makes the original exceptional?

QUESTION – Which assumptions should be reconsidered today?

CHANGE – Where is there meaningful potential for design intervention?

## **2. Explore - Question assumptions. Build alternatives.**

Rather than moving quickly toward one final solution, students develop variants.

Ideas are explored through drawing, material experimentation, construction studies and physical prototypes. Students are expected to enter the workshops early and use making as a way of thinking and learning.

Different conditions may be introduced throughout the project: changes in material availability, manufacturing technology, scale of production, transportation, repairability, use patterns or technological development.

At the same time, projects are viewed through a series of Design Lenses introduced in the accompanying Sustainability course. Each lens asks a different question, helping students challenge assumptions, reveal new opportunities and formulate Design Principles that guide the development of the project.

Not every experiment needs to succeed. Each variant should generate knowledge that informs the next. Variant – Evaluate – Learn – Next Variant

Output: A series of sketches, material studies, construction experiments and functional prototypes demonstrating different approaches to the reinterpretation of the original object.

## **3. Make**

Synthesize what you have learned.

The final proposal emerges from the knowledge generated during the Explore phase.

Students synthesize the strongest insights from their variants into a coherent reinterpretation of the original object. The objective is not simply to select the best-looking variant, but to demonstrate how experimentation and reflection have informed the final design.

The final object should be developed at 1:1 scale, wherever appropriate, using authentic materials and relevant manufacturing processes.

Craftsmanship, construction, material understanding and production quality are central to this phase. Students are expected to work closely with workshop staff and use the school's facilities as an integral part of the design process.

The result should be considered as an object, not merely as a model representing an idea.

## **4. Reflect - Original vs. Reinterpretation**

The final object is evaluated in relation to the original.

Students articulate:

- What was preserved?
- What was changed?
- Why?

Which assumptions were challenged?

- How did the Sustainability Design Lenses influence the project?
- What has become more sustainable?

And importantly:

What new trade-offs did the redesign introduce?

The objective is not to claim that the new object is simply "more sustainable." Instead, students should demonstrate an understanding of sustainability as a complex set of design decisions with environmental, social, functional and material consequences.

### **Deliverables:**

Students will present:

- Analysis of the original design object

- KEEP / QUESTION / CHANGE analysis
- Definition of the object's Design DNA
- Material, construction and manufacturing research
- A series of design variants • Physical design, material and construction studies
- Functional prototypes and iterations
- Design Principles developed through the Sustainability Design Lenses
- Technical drawings and production information where appropriate
- A high-quality, functional 1:1 final object • Final reflection and from-to statement
- Design exhibition at HfG

### **Learning Objectives**

Redesign does not mean changing everything. Good redesign requires knowing what not to change. By completing the project, students will:

- develop an understanding of significant objects from design history and the conditions in which they were created
- learn to analyze design quality through purpose, use, material, construction and manufacturing
- distinguish between essential design principles and superficial formal characteristics
- use variation and physical experimentation as central methods of design development
- gain experience with authentic materials, manufacturing processes and workshop-based production
- understand sustainability as a consequence of interconnected design decisions rather than a single product attribute
- apply different Sustainability Design Lenses to challenge and strengthen design decisions
- develop the ability to preserve valuable qualities while responding to changing technological, environmental and social conditions
- critically evaluate the benefits and trade-offs created by a redesign

### **Integration with the Sustainability Course**

This studio is closely linked to the accompanying Sustainability course and translates selected concepts and perspectives into a hands-on tangible design project. Topics such as materiality, Circular Economy, resource efficiency, modularity, reparability, and product longevity are explored.

### **Assessment**

Assessment is based on continuous evaluation throughout the semester, including interim presentations at the end of each project phase, active participation in the design process, and the overall quality of the developed work. Particular emphasis is placed on the appropriate application of design methods, the development of ideas throughout the different project phases, the ability to address complex systems through design, and the clarity with which final process and system concepts are developed and communicated. The final assessment considers the quality of the design outcome, the standard of its presentation and documentation, the transparency of the design process, and the student's engagement and contribution throughout the semester.

## **Sustainability PG 4**

**teacher:** Prof. Leif Huff

**ECTS:** 2

**Max. number of participants:** -

**Course content:**

### **Sustainability — Roles and Methods in Design**

This course introduces sustainability as a systemic design practice that connects human needs, technological development and planetary resources. Rather than treating sustainability as an abstract principle, the course explores the evolving roles of designers within complex transformation processes.

Students work with six perspectives — Systems Thinker, Facilitator, Steward, Visionary, Moderator and Ethicist — to understand how design can operate across disciplines and scales.

Through lectures, discussions and applied exercises, the course provides methodological tools for research, analysis and strategic thinking, including systems mapping, lifecycle perspectives and scenario-based exploration. The aim is to develop a design position that integrates environmental awareness with social and technological contexts, and to build a foundation for responsible decision-making within contemporary product and process design.

**Note:** You are required to attend this course if you choose Product Design 4 “Sustainability Studio”. However, you can also attend the course independently of Product Design 4.

## Ergonomics A

**teacher:** Felix Krieger

**ECTS:** 6

**Max. number of participants:** 4

**Course content:**

### Cooperation with Robert Bosch GmbH

#### Tools Fastening System

A new fastening system is to be developed for hand tools worn on the body, power tools, and small parts (e.g. screws). The system should enable the attachment, storage, and provision of tools and small parts both in the workshop and during transport, resulting in a flexible, universally applicable, and modular system. The target group consists of professional tradespeople working in the field, for example on construction sites.

#### Requirements:

- Simple, quick one-handed operation for attaching and releasing the fastening mechanism and removing the tool
- A high level of control through haptic support and tactile feedback
- Handling without having to look at or consciously focus on the fastening/operating elements
- Attachment to the body via functional elements/clothing such as belts or vests
- Occupational safety must be ensured, e.g. tools must be secured against falling
- Magnetic closures must differ from existing solutions
- Design in accordance with the corporate design of Robert Bosch Power Tools GmbH

#### Project approach:

- Research into existing fastening systems, with a focus on magnetic closures
- Investigation (observations/interviews) of activities performed by professional tradespeople
- Development of product ideas
- Development of solution concepts and initial testing with prototypes
- Interim presentation and concept selection
- Design development, detailing, and 1:1 model making

- Testing the design in an application that is as realistic as possible
- Optimization and further development
- Documentation and presentation of the results
- Commitment, teamwork, and progress

## Ergonomics B

**teacher:** Andreas Hess

**ECTS:** 6

**Max. number of participants:** 4

**Course content:**

### **Cooperation with Bessey Tool GmbH**

bessey.de

The project involves designing new hand tools for the portfolio of BESSEY Tool GmbH & Co. KG. The new tools should:

- Simplify door-frame installation, or
- Adapt the existing 360° screw-clamp handle to a new application.

A combination of a door-frame installation tool and 360° handle is also possible.

### **Requirements**

- Target group: professional tradespeople
- Manual operation (hand tool)
- High level of simplicity and robustness in use
- Design in accordance with the corporate design of BESSEY Tool GmbH

### **Project Process**

The project will follow these steps:

- Testing and analysis of existing BESSEY tools and, where appropriate, competitors' products
- Observation and interviews during professional trade activities
- Search for product ideas
- Development of solution concepts and preliminary models
- Interim presentation and concept selection
- Design development, detailing, and 1:1 model making
- Testing the design in an application that is as realistic as possible
- Optimization and further development
- Documentation and presentation of the results

### **Assessment Criteria**

The following aspects will be assessed:

- Process and problem analysis
- Degree of innovation of the proposed solutions and final design
- Use of ergonomic and usability testing
- Quality of design development and model making
- Commitment, teamwork, and progress

Cooperation Partner: BESSEY Tool GmbH & Co. KG

## 3D Design 2 A/B

**teacher:** Jessica Bulling

**ECTS:** 6

**Max. number of participants:** 6

**Course content:**

### **Designing a micro-climate logger for cliff ecosystems.**

How does rock climbing affect the plants and animals living on cliffs? MIREN Rocks is a worldwide research project investigating this question. It is part of the MIREN network, which studies how humans and climate change influence mountain ecosystems.

The logger will house sensors that measure microclimate data – such as soil and surface temperature and soil moisture – to assess the impact of climbing on the cliff ecosystem. The design task is the development of a compact, durable and easily mountable housing for this data logger, which minimizes intrusion on nature and withstands environmental stressors. In this course, you will work on a real research challenge at the intersection of product design, material semantics and ecological field research – from concept and form finding to material selection and prototyping.

## Product Design 5

**teacher:** Markus Turber

**ECTS:** 7

**Max. number of participants:** 4

**Course content:**

### **Designing Machines for a Landscape in Transition**

AI is reshuffling our profession. Designers who once shaped objects and interfaces now shape systems — and they do so with tools that research, model, simulate and code alongside them. This is a challenge, not a convenience: the demands on systemic understanding and critical thinking are enormous. The semester will therefore start at full intensity. The systemic questions of this transformation have to be asked and answered quickly, because the product we are designing depends on them.

That product is a machine for a real place. The vineyards and orchard meadows of the Remstal near Stuttgart are losing their farmers. Terraces built over 800 years were removed in the 1960s to make the slopes accessible to tractors; that landscape now faces drought, heavy rain, economic pressure and abandonment. The Zukunftsstiftung Remstal, a newly founded foundation working with leading European research institutes and regional companies, is preparing the transition to a cultural landscape that is economically self-sustaining, ecologically diverse, socially accepted, resilient to heat and flooding — and worked largely by small agricultural robots.

Students work in three steps: asking the right questions and assembling the facts that can be known; synthesising a landscape model with the machines that will become available over the coming years; and designing an exemplary pair of landscape and machine. The outcome is a concrete product concept — form, function, size, energy, interaction — that is economically, ecologically, aesthetically and socially defensible.

We also build. AI is changing the toolchain of designers, engineers and product owners, increasingly one and the same person. Students automate whatever a digital tool can take over, even where the tools are still imperfect.

It will be a dense semester. But students have the opportunity to become the first generation of designers who use and master these skills natively.

Requirements: an active subscription to an AI-enabled development environment (e.g. Cursor or Claude Desktop with Claude Code) for the duration of the course, and a short mandatory reading list announced at the start of the semester.

Assessment: project work, interim presentations and a final documentation of the landscape-and-machine concept.

**Please note** that a full AI subscription is required for participation. Please make sure that you have an appropriate paid subscription before the course/session.

## My designed and Designing Ego

**teacher:** Carolin Morlock

**ECTS:** 2

**Max. number of participants:** -

**Course content:**

### Designing relationships and narratives in dialogue

Based on phenomenological, anthropological, body-oriented and systemic-constructivist theories of perception, and transactional analysis of action and communication, students reflect on how they individually shape their relationships with themselves and their lifeworld. The ability to perceive and shape these relationships reflexively and holistically is crucial for the quality of design.

In the context of a rapidly changing world— pre-shaped by artificial intelligence and sometimes perceived as an existential threat—perceptual competence and self-regulation are becoming increasingly necessary for purposefully designing for the more than human world.

How do we engage with ourselves, the world, objects, projects, projection surfaces, and other selves? How do we shape our relationships? Do we succeed in them? What feelings go along, and how do these feelings guide us? And who or what has shaped our own identity and self-perception so far—autobiographically, historically, culturally? What longings do we follow?

How do others—and how do we—identify ourselves? What stories do we tell about ourselves and the world? How do we justify our creative actions?

In addition to theoretical insights into perception, embodiment, intentionality, relational needs, the self, social role competencies, lived body language in space and resonance, directive and non-directive conversation techniques, culture, narratives, personality patterns, and team dynamics, there is ample time for perception exercises and small-group discussions. Through these activities, participants will develop emotional awareness, relational competence, the ability to handle paradoxes, and reflective, generative, and complexity-reducing attitudes.

**participation requirements:**

active participation in 7 sessions (excuses accepted only with a doctor's note)

- consistent completion of the learning journal
- short presentations in each session
- after the final session, submit a 2-page A4 reflection on your own learning experience regarding 5 preferred models + photographs of the learning journal layout

(text should be well-structured; models should be presented briefly and concisely; the reflection should be self-reflective and meaningful)

Find an old book or journal with existing text, pictures, or illustrations that you can destroy and use for a creative makeover—either from your own collection or a secondhand store. Bring it along with the necessary tools and materials—scissors, cutting knives, glue, your favorite colors, photos or images for collages, fabrics and other materials, a needle and thread, etc.—to the first session.

## Product Photography

**teacher:** Jens Werlein

**ECTS:** 2

**Max. number of participants:** 8

**Course content:**

Independent photography of products in and outside the photo studio. The course covers idea generation, product selection, background selection, development of a photographic concept, and professional implementation in terms of composition, design, lighting, and exposure. Students will also learn professional image editing and presentation for web and print. The aim is to enable students to independently photograph their own future products in a professional manner.

**Course Assessment:**

Printed outcomes of the photographed project.

## Claymodeling

**teacher:** Peter Lehrke

**ECTS:** 2

**Max. number of participants:** 8

**Course content:**

This course is designed specifically for international students. The primary focus is on working with (Staedtler's) „Marsclay“, a high-quality professional styling clay (not to be mistaken with clay for ceramics) commonly employed in transportation design. However, its versatility also makes it an excellent tool for industrial design and other creative fields.

Students will receive an introduction to essential clay modeling techniques, learning how to shape, sculpt, and refine forms using this flexible medium. The course emphasizes training the eye to recognize and replicate freeform surfaces, a crucial skill in many areas of design.

At the heart of the course is a project-based assignment, involving hands-on work with the material and developing three-dimensional thinking in the real world. This hands-on course offers a unique opportunity to engage with physical modeling and refine our design instincts in a collaborative, creative environment. No prior experience in clay modeling is required.

**Learning Outcomes:**

- Master basic clay modeling techniques
- Develop the ability to visualize and create and enhancing the understanding of freeform surfaces, curves, transitions, etc.
- gain practical experience in transportation and industrial design application

## Ring modeling

**teacher:** Gerd Schmidt

**ECTS:** 2

**Max. number of participants:** 6

**Course Content:**

Making Rings - Design a ring for your finger that will then be cast in sterling silver. This ring-making course explores several aspects of designing and producing a ring.

Firstly, the design of the ring is influenced by the sand-casting process. This technique can shape the design, but it can also impose certain limitations. The design must take the casting process into account and therefore needs to have a certain minimum volume. Since the rings are made to be worn on the finger, they must also remain a manageable size.

You will design a ring based on the given theme. Think of the ring as a small sculpture on the finger.

A few days before the course begins, we will meet as a group. During this meeting, I will explain the exact content of the course and give you some preparatory homework that will be necessary for the rest of the workshop. Attendance at this meeting is important, as missing it may make it difficult to follow the course properly.

During the course, you will learn how to use the necessary tools and techniques. Through practical work, you will discover why undercuts in the model can make demolding impossible. Be prepared to get your hands dirty!

Hopefully, you will have a lot of fun and enjoy making your own rings.

Theme

- will be decided
- There should be a maximum of two rings.

Design

- Drawings - visualize ideas
- Oversized clay model to check sizes and proportions of the design.

Master Model

- The clay model will be transferred into a finger-size-appropriate wax model.

- This model will serve as the master model from which the silver ring will be cast.
- The work must be carried out precisely, particularly with regard to size, surface, and parting line.

#### Technology

- sand-casting process, including: two-part molds, designing without undercuts, demolding
- Preparing the casting box and sand, separating, pouring
- The casting technique shapes the mold

#### Casting

- After pouring: remove the casting from the sand, burnt sand is removed.
- The rings are weighed and the weights are recorded.
- Casting defects may occur and are part of the process.

#### Reworking

- Casting residues are removed.
- The surfaces are filed, ground, and polished.

The teacher will accompany you step by step throughout the entire process.  
The student is responsible for the cost of the silver material.

## Rhino (Basics)

**teacher:** Benjamin Funk

**ECTS:** 2

**Max. number of participants:** 21

#### Course Content:

This course offers a structured introduction to the CAD software Rhino 3D, with a primary focus on Product Design / Industrial Design. The curriculum covers hard-surface modeling and especially freeform surface creation using NURBS. Depending on time and progress, the course will also include a brief introduction to Rhino Grasshopper and/or Rendering (Rhino Renderer, SolidWorks Visualize, etc.)

#### Course Objective:

To master the fundamentals of Rhino confidently, enabling students to independently pursue advanced learning and deeper application in self-study. **Required Equipment:**  
None, as classes and exercises take place in our computer labs / pools.

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None, as classes and exercises take place in our computer labs / pools.

**PLEASE NOTE:** The HfG cannot provide Rhino licenses to students. If students wish to use Rhino on their personal computers, they must purchase a student license themselves (approx. €100, Mac/PC).

## Drawing 3

**teacher:** Eberhard Holder

**ECTS:** 2

**Max. number of participants:** 6

**Course Content:****Flow**

An experience in which, when drawing, one movement follows another, as if by itself, as if something were acting through it: being in flow.

A state of consciousness in which we forget space and time, are maximally happy, motivated, and productive—as if in a trance.

**Topics**

Drawing as a research tool

Drawing as a thinking tool

Drawing as a presentation tool

Course content

Drawing as an act of seeing

Learning objectives

Drawing representation

**Performance assessment:**

Participation

Tasks successfully completed, no grades.

## Rendering 4

**teacher:** Benjamin Baumhauer

**ECTS:** 2

**Max. number of participants:** 5

**Course Content:**

Digital Drawing and Rendering for realistic Concepts in Photoshop.

Introduction to the basics of 2D digital rendering  
(perspective, light/shadow, color).

The goal is development of image content, composition, and objects with the aim of achieving a coherent and pleasing presentation.

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## interaction design courses

### Interactive Communication Systems 1

**teacher:** Kai - Magnus Müller

**ECTS:** 6

**Max. number of participants:** 3

**Course content:**

The course is about designing and prototyping an interactive application/exhibit in the context of an exhibition, museum or fair. The aim is to get to know the fundamental interrelationships within the field of human-computer interaction and information design.

The students deal with basic forms of interaction forms and media-specific design problems, information architecture, information and data visualization, relationship of text, image and animation, and prototypical implementation or simulation.

### Interface 2

**teacher:** Carmen Hartmann-Menzel

**ECTS:** 8

**Max. number of participants:** 2–6 places

**Course content:**

Based on a given project topic, we develop product service systems that comprise both a physical product and a digital service. This means developing two interfaces: one physical and one digital, and combining them in a consistent design. From concept development and information architecture/flows to visual design and model building to evaluation with users, all activities of human-centred design are carried out. In addition, multimodal interaction is taken into account, i.e. the combination of haptic, visual and auditory feedback.

### UX Design / Application Design 2

**teacher:** Hartmut Bohnacker

**ECTS:** 8

**Max. number of participants:** 2–6 places

**Course content:**

In the advanced course "Application Design 2", students develop independent, complex application concepts for mobile or desktop platforms. The course focuses on the craft and mindset of the designer: How do you translate complex user needs and data into a coherent information architecture, an appropriate visual identity, and clear interaction patterns?

Modern AI and coding tools are used in the course as extended prototyping tools to test design concepts under realistic conditions (with real functionality and logic). However, the core priority is design autonomy: students learn to consistently enforce their visual and conceptual vision—and to purposefully question generic UI patterns or standard AI suggestions ("default layouts") and replace them with better, independent design solutions.

## Usability Lab

**teacher:** Matthias Peissner

**ECTS:** 2

**Max. number of participants:** 3

**Course content:**

The course »Usability Lab« teaches the fundamentals of user participation in all stages of human-centered design and innovation. Students learn to understand the strategic goals and benefits of actively involving users and stakeholders in their design and innovation activities. They gain an overview of best practices and established methods and learn how to create project plans and select and apply appropriate methods in realistic settings.

Based on a general understanding of the quality criteria of empirical research, the students can actively train their research skills in deep-dives into two selected methods. One of the two methods for hand-on experiments is user testing. The other method is selected according to the students' prior knowledge and interests.

Today's human-centered design and user testing are increasingly influenced by AI technologies. The course discusses the potential benefits of AI support in all phases of human-centered design and examines how modern AI tools can improve the user research and testing capabilities of future-oriented designers.

## 3-dimensional fundamentals in medial space (IG2)

**teacher:** Prof. Dr. Franklin Hernandez Castro

**ECTS:** 4

**Max. number of participants:** 6

**Course content:**

This intensive course on data visualization, developed in JavaScript, lasts four weeks and is structured as a hands-on workshop at the university level. Throughout the course, students independently select a topic of interest and an associated dataset, which serves as the basis for developing a meaningful visualization. The emphasis is placed on understanding the relationship between the data, the narrative structure that can be built from it, and the design decisions necessary to communicate the information clearly and effectively.

The course is based on a learning-by-doing methodology, in which the design and development process takes place iteratively. Students experiment with different strategies of visual

representation, implementing them using JavaScript tools for interactive visualization. By the end of the workshop, each group of students produces a functional and conceptually justified visualization designed specifically for the type of data and the questions they wish to explore.

## Invention Design 2 (IG4)

**teacher:** Prof. Benedikt Groß, Prof. Mark Meyer

**ECTS:** 8

**Max. number of participants:** 2–6 places

**Course content:**

Every technology that feels ordinary today, from the smartphone to the sensors that track our health, once seemed strange or even impossible. In this course students explore emerging technologies with a perspective firmly directed toward the future. Rather than starting from today's problems, they build compelling scenarios that speculate about a future in which a chosen emerging technology has become completely normal, or in which its potential has been clearly demonstrated.

From within that imagined everyday life, they sketch the products, tools, and artifacts such a world would contain. The design focus lies on interaction, context of use, and a thoughtful assessment of opportunities, side effects, and implications.

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## communication design courses

### Information Design (KG3)

**teacher:** Prof. Daniel Utz, Stefan Kraiss

**ECTS:** 6

**Max. number of participants:** 5

**Course content:**

Building on the fundamentals of typography and layout, this course will focus on the basics of information design. Typography forms the necessary framework, but the emphasis is on learning about and applying different visualization models:

- Diagrams and data visualizations
- Infographics, illustrations, and functional representations
- Icons and pictograms
- Maps and timelines

As part of the project work, complex topics will be presented in an exciting way with the help of graphic representations, and abstract data will be processed and clearly presented using interactive information systems. The resulting medium should convey content in a compact form. This gives the viewer faster and more immediate access than with purely text-based information transfer.

A clear focus on information design is important to us: your projects will center on conveying content with the help of diagrams, data and infographics, illustrations, pictograms, etc.

### Audiovisual Design (KG3)

(This course has to be selected together with one simulation course.)

**teacher:** Prof. Michael Götte, Selina Dick

**ECTS:** 6

**Max. number of participants:** 5

**Course content:**

**Audiovisual Design**

In this course, students work in teams using a selected musical sequence as a structured framework. You will reconstruct dramaturgy, tracks, hierarchies, and interactions, translating these through notation, morphologies, and iterative character shaping into a coherent, legible time-based work (including documentation, poster, and presentation).

Core Pedagogical Value

This module serves as a critical foundational component: you will learn that design in dynamic media is not primarily about "looks," but rather about rules, timing, and relationships—and that behavior conveys meaning.

Consequently, the process of "making animation" evolves into a methodologically grounded design discipline. This provides a fundamental framework that remains applicable and scalable for all subsequent projects, including motion design, UI/UX, and generative systems.

## Simulation 1 (KG2)

**teacher:** Claudius Schulz

**ECTS:** 2

**Max. number of participants:** ...

**Course content:**

AfterEffects class – only in combination with Audiovisual Design, for absolute beginners.

## Simulation 2 (KG3) (This course is part of the Audio Visual Design Course.)

**teacher:** Claudius Schulz

**ECTS:** 2

**Max. number of participants:** ...

**Course content:**

AfterEffects class – only in combination with Audiovisual Design, for more advanced students.

## Interactive Design (KG3)

**teacher:** Prof. Ulf Harr

**ECTS:** 2

**Max. number of participants:** 5

**Course content:**

1. Short Description  
Fundamental knowledge in designing digital products.
2. Learning Content
  - Principles of interactive design
  - Designing interfaces and creating variations in Figma
  - Developing functional prototypes in Figma
  - Patterns

- Information architecture / Hierarchy
- Navigation
- Color palettes
- Typography
- Icons
- Use of light, shadow, and perspective
- Animation and transitions
- Design systems
- Libraries in Figma
- Accessibility

### 3. Approach

Through a series of systematically structured exercises of increasing complexity, students will practice applying principles of interactive design. Various solution approaches will be discussed in group settings.

### 4. Learning Objectives

- Proficient use of Figma for designing digital products
- Understanding and applying design principles in digital design
- Creating variations
- Prototyping
- Articulating design decisions and providing constructive critique

### 5. Assessment

Completion of exercises, presentation of results, and active participation in discussions.

## Digital Maps (KG4/6)

**teacher:** Prof. Marc Guntow

**ECTS:** 2

**Max. number of participants:** 5

### **Course content:**

#### 1. Course Description

In this seminar, students discuss historical maps and receive an introduction to creating data-driven maps using QGIS.

#### 2. Course Content

Maps, as instruments for conveying knowledge and generalizing spatial information, are one of the oldest forms of communication design. By examining several significant or particularly insightful historical maps, we will discuss key cartographic parameters such as scale, symbolism, projection, color scheme, etc.

In the second part of the course, students will use the software QGIS to create maps on topics of their own choosing, reproject them, and construct a globe as a haptic data map.

Furthermore, students will be introduced to creating their own datasets and integrating publicly available data into digital maps.

#### 3. Methodology

Joint discussion of historical maps based on student presentations.  
Input on the history of cartographic works from Mercator to Google Maps.

Input on the parameters and purpose of cartographic conventions.  
Input on types of projections in cartography relevant to designers.

#### 4. Learning Objectives

Processing of location-based content, ability to evaluate and design meaningful static maps, and fundamental knowledge of Geographic Information Systems (GIS) and their associated data formats.

#### 5. Assessment

Presentation and exhibition of a self-designed globe.

## User Experience (KG4/6)

**teacher:** Dominik Witzke

**ECTS:** 8

**Max. number of participants:** 6

#### **Course content:**

A good idea alone does not make a great product. Together we work through a complete, iterative and user-centred design process and develop from it a user- and experience-centred digital application, typically a mobile app.

#### Course content

Methods of an iterative, user-centred design process in theory and practice, from problem definition through user research and requirements analysis to the simulation of a solution

Development of information architectures, interaction models, interaction principles and graphical interfaces

Design variants and their evaluation (visual design, information architecture, interaction design) as well as methods for prototypical realisation

Evaluation of designs with users and the translation of those findings into the next iteration

Foundations of accessible design and their application in the design work

Use and critical assessment of AI-supported tools within the design process, for example in research synthesis, variant generation and prototyping, including where they raise the quality of the results and where they dilute it

Use of design, presentation and simulation tools (e.g. Figma, FigJam, ProtoPie)

#### **Topic**

From the everyday to the extraordinary: a digital application that solves a small everyday problem with excellent user experience.

#### **Course description**

#### **Approach**

For a great product, user experience (UX) is the decisive success factor, and it reaches well beyond user interface (UI) design.

Starting from a self-selected topic, students analyse the flows of existing applications or processes. During the research phase, user research methods capture situations of use, which are then condensed into user groups, needs and clearly formulated problem statements, complemented by a look at the market and competitive landscape. Only on this basis do ideas for solutions emerge, which are then selected and sharpened into requirements. Information architecture and interaction design follow, before the user interface is designed and realised as a prototype.

Testing one's own designs is an integral part of the process. At least one test of the prototype with people from the target group is required, and its findings feed into the final round of revision. The form the implementation takes may vary depending on the concept and the medium.

### Learning objectives

At the centre is the acquisition of the design methods that are fundamental to developing user- and experience-centred digital products, from analysis through conception to the design of the user interface.

This includes justifying design decisions on the basis of the insights gathered and defending them within a team, as well as the deliberate use of AI-supported tools and a professional assessment of the results they produce rather than their unchecked adoption.

### Assessment

Assessment is based on the concept developed through the design methods taught, the design quality of the user interface and the prototype, the traceability of the design process, as well as the final presentation and the documentation.

The use of AI-supported tools is permitted, but must be disclosed and justified in terms of its effect on the result.

## Corporate/Visual Identity (KG4/6)

**teacher:** Prof. Daniel Utz, Lena Heim

**ECTS:** 8

**Max. number of participants:** 6

### Course Content

#### Topic 1: Just Packaging?!

Packaging does not have a good reputation: people want to avoid packaging waste, and it is often claimed that "decoration only" is unnecessary. However, beyond their primary purpose—protecting the goods inside—packages fulfill other important functions:

- Orientation: Who is the manufacturer of this product?
- Information: What does it contain? What are its properties?

Additionally, packaging conveys numerous other messages: How high-quality is the product inside? Which aspects are important to the manufacturer? "Unboxing" has long since become a part of the user experience.

Designing a single package is one task; developing an entire system that works across multiple products, variants, or sizes is another. How do you recognize at a glance that several products belong to the same brand? What remains consistent throughout the series (logo, color palette, typography, materiality), and what varies—e.g., to distinguish between product variants, flavors, or sizes? A good series must be recognizable as a family while still keeping each individual product clearly identifiable.

Your task this semester: You will conceive and develop a new brand, including a well-thought-out packaging series.

Your designs will not remain on the screen: at the end of the semester, you will create physical prototypes. Only in the model can you see whether proportions, material choices, folding, or opening mechanisms actually work—and whether the concept feels convincing to the touch.

#### Topic 2: Sports Club, Leisure, Culture & Co.?

Sport is not just about physical activity; it also encompasses facets beyond health, self-optimization, and competition. From hooligans to local fan zones, from the Olympic Games to recreational sports clubs, the spectrum of athletic communities and club structures is vast, and their existence impacts our society. Clubs can produce talent for professional sports, support

children through youth work, assist families with holiday programs, bring strangers together, and much more.

Your task this semester: Choose any sport and invent a sports club for it.

Who is your club intended to appeal to? Who is the club for?

Beyond the activity itself, what values and functions should your club convey?

The goal is to conceive a functional visual identity that covers the necessary, explanatory, and typical representations tailored to the needs of your chosen club. Furthermore, you will decide which media types are required for your club. The following questions can help guide you:

- Is it a team or individual sport?
- In what environment is the sport practiced? What equipment is used?
- How is the club structured? Are there organizational charts or hierarchical structures that are important to understand?

Your designs will not remain on the screen: at the end of the semester, you will create physical prototypes. Only in the model can you see whether proportions, material choices, folding, or opening mechanisms actually work—and whether the concept feels convincing to the touch.

### **Learning Content**

At the beginning, the status quo is analyzed in order to derive goals for new communication strategies:

- Which target groups are addressed?
- Which media and formats are used for communication?
- Are the available communication channels used efficiently?
- Which aspects stand out positively, where are there deficits?
- What requirements arise for a new visual identity?

On this basis, different new design approaches are developed. The focus is initially on the design of the basic design elements, later other parameters such as color and imagery are included.

As the project progresses, possible combinations of the individual elements are examined and a modular system of coordinated components is developed. To better assess the designs, the adaptation options in various media and applications are examined. The focus can be on the following areas:

- Digital media: Website, animation sequence
- Communication in space
- Printed matter: leaflets, brochures, advertisements, posters

### **Procedure**

#### **Conception**

- Research
- Creating a briefing from the perspective of the (fictitious) client

#### **Design**

- Drafting different design approaches: wordmark or logo, key visual, typography
- Comparison of adaptations for different formats, media and applications

#### **Elaboration**

- Development of design parameters: typography, colors, formats, grids, layout principles
- Design of different media and applications
- Overview of the basic design elements
- Presentation of the results
- 

### **Teaching objectives**

The primary teaching objective is to gain experience in dealing with the design elements that make up a visual identity system: in addition to the wordmark or logo, these are primarily typography, color, form and imagery.

During the design process, the interaction of these elements is developed within different applications and media.

#### **Proof of performance**

- Overview of the visual identity system in the form of a poster series (DIN A1)
- Animation sequence / project film
- Documentation

#### **Criteria for evaluation**

- the range of designs and the willingness to seek unusual solutions
- the consistent development of different design approaches
- typography, layout, precision in detail
- the presentation of the results
- the documentation: completeness, traceability of the design steps

## Information Design (KG4/6)

**teacher:** Prof. Andreas Pollok

**ECTS:** 8

**Max. number of participants:** 4

**Course content:** Movie as Information

Films are highly condensed information carriers: plot, characters, temporal structure, color, sound, and editing form a complex web. Added to this are technology and production, filming locations and settings, budget, reception, and history of impact. Films quote other films, adapt literary sources, are remade, and stand within traditions of influences and role models. Behind them lie the biographies of directors, actors, cinematographers, or composers, whose body of work often unfolds over decades. Hardly any other cultural field offers such diverse material for analysis and visualization.

We will analyze films and visualize the information that emerges within and around them. The subject matter could be, for example, a single feature film, a series, the entire body of work of specific directors or actors, a genre, or a historical era. We will research backgrounds, collect data, investigate connections and developments, and translate these into a clear and informative visual format.

The thematic focus and the medium will be defined by the participants themselves. Possibilities include print, animation, interactive applications, AR or VR applications, spatial installations, or transmedia concepts that link multiple media formats.

Following a research phase, three concepts are to be developed; one of these will be executed as a final project. Projects are to be completed in groups (2–3 persons). Each group will summarize their project in a "project film," which will serve both as the presentation for the semester exhibition and as an addition to their own portfolio..

#### **Methodology**

Topic selection and film analysis

Research and processing of data

Iterative development of ideas and concepts

Implementation of transmedia formats, ranging from print and animation to virtual reality  
Presentation, project film, and documentation  
Reflective use of AI tools from research through to implementation

### **Learning Objectives**

Analytical engagement with film as a cultural medium  
Methods for visualizing workflows, relationships, and complex processes  
Development of signs, pictograms, and diagrams  
Application and evaluation of various visualization techniques  
Clear communication of complex content across different media boundaries

### **Assessment**

Participation in project reviews, project film, presentations, project results (conceptual and design quality), and documentation.n.

## **AI in Communication Design (KG4/6)**

**teacher:** Prof. Mark Meyer

**ECTS:** 2

**Max. number of participants:** 3

### **Course content:**

Generative AI systems are fundamentally transforming the professional and conceptual field of communication design. This seminar approaches AI not merely as a productivity tool, but as a medium that raises fundamental questions about authorship, aesthetic agency, and the role of designers. Students will develop a critical and practical understanding of AI-assisted workflows, from image generation and typography to brand communication and editorial design, and situate these tools within cultural, ethical, and design-theoretical contexts. The course combines hands-on experimentation with theoretical reflection, equipping students to apply and critically evaluate AI in professional contexts.

### **Learning Methods:**

A combination of theoretical input and practical exercises.

### **Learning Objectives:**

By the end of the seminar, students will be able to:

Critically assess the aesthetic and ethical implications of AI-generated communication artifacts  
Integrate AI tools purposefully and reflectively into design workflows  
Situate current AI developments within the history and theory of communication design

### **Assessment Criteria:**

Documentation of practical exercises throughout the semester.

### **Literature:**

- Joanna Zylińska: AI Art: Machine Visions and Warped Dreams (2020)
- Kate Crawford: Atlas of AI (2021)
- Lev Manovich: The Language of New Media (2001)