

Course Catalogue

2019/20

Course descriptions: Product Design

Product Design 3 (6 ECTS) | Carmen Hinderberger - English

What is the content of the course?	<p>Designers Fridays for Future</p> <p>The climate crisis is a real threat for all humanity and its handling is the major challenge of the 21st century. Every Friday thousands of young people in Germany and all over the world demonstrate for better climate politics and more protection of the environment.</p> <p>What does this mean for future product developments? Does it affect our consumer behaviour and the industrial design of sustainable products? Modern target groups ask for innovative products with new user experience. Sustainability and competitiveness at the same time is the challenge. In this context we design products in the field of climate protection in 5 categories: RECOGNIZE, REDUCE, CREATE, STORE, TRANSFORM.</p> <p>Any product can be designed as long it is sustainable and reasonable!</p>
Projects and goals of the course	<p>1. Research Presentation of the research results in form of reports and as handouts for all students in a given layout.</p> <p>2. Design conception With the help of sketches, coloured 2D drawings, renderings and mock-ups a minimum number of 2 designs should be explored and developed. >> Presentation and selection</p> <p>3. Design finalisation The chosen design concept will be finalised in all design relevant concerns including Form, material, surfaces, colours, naming product graphics and packaging. A model should be made. >> Presentation and documentation</p>
Learnings and results	<p>Classic design process including the following modules: analysis, strategy, conception, finalisation and presentation.</p> <p>Definition of formal language and product semantics for different applications. Teamwork as well as work on its own project, time management and presentation routine.</p>
Course assessment	<p>Presentation and handout in Phase 1. Model and presentation at the end of the semester. 6-8 pages documentation of each project that will be part of a book which shows the performance of all students of the semester group. Presence and participation will also be graded.</p>
Does the course have a more practical or theoretical focus?	<p>Mostly practical</p>

Course descriptions: Product Design

Product Design 4 (6 ECTS) | Andreas Hess - English

What is the content of the course?	How a pair of spectacles become a fashion statement and part of personal identity. How a bicycle moves from a means of transport into future-oriented mobility and sport. How a drink bottle has been transformed from a liquid container into environmental packaging and a statement for sustainability. You will design and develop a walker which gives its user maximum support in daily life and meets daily requirements and where its manufacture, structure, transport, longevity and material efficiency will be environmentally pioneering and, through its design and functional emotion, is considerably more than only necessary or tolerated.
Projects and goals of the course	The objective of the course is for the students to work through all the phases of a design project. These will cover deadline and content aspects as if it were a real project as required in a customer-service provider relationship. During the process all the necessary steps should be followed and presented in such a way that the customer has an emotional response, is comprehensively informed about the concept and can then make long-term commercial decisions based on this information.
Learnings and results	The main criteria here are: Deadline compliance, focus on the student's written brief, the creative approach itself, consumer focus, visualisation, functional preparation, technical design details and a convincing presentation.
Course assessment	The following project steps will be evaluated on specified deadlines: 01 Market research, structure and familiarisation with the issue of aids. User analysis on how walkers are used. Project brief with a specific and detailed description of the objectives. 02 Ideation and design concept based on the project brief (min. 10 variants). Sketch and mock-up structure for visualisation and tests. Evaluation and selection of one concept for further development. 03 Form and design drawings with models and mood boards (min. 10 variants). Implementation and detail design using CAD and rendering. 04 Model construction, presentation and exhibition presentation.

Course descriptions: Product Design

Product Design 5 (7 ECTS) | Prof. Susanne Schade - English

What is the content of the course?	Free choice of topic: The students choose their own topic for a project work. The topic will be examined for relevance and feasibility and then projected. Here, the focus of the artwork (design, process, service) is determined. In the compressed search problems, findings and opportunity areas are defined and then transferred into concepts that are described and visualized as a solution for the respective issue. This can result in products and services.
Projects and goals of the course	Independent development of relevant topics, questions and genres and visualization of creative solutions.
Learnings and results	Self-developed design (problem) solutions for relevant issues.
Course assessment	Project presentation with all necessary design resources.
Does the course have a more practical or theoretical focus?	Mostly practical

Course descriptions: Product Design

Process Design 1 (7 ECTS) | Prof. Matthias Held - English

What is the content of the course?	<p>Ecodesign - designing for modern education</p> <p>The standards modern school houses and equipment have to live up to have changed drastically in recent years, especially in Germany. New strategies for teaching and learning have supplemented or replaced the traditional teacher-up-front method. The increasing number of all-day schools has new demands for the design of places to rest, to play or to eat and drink. The digitalisation of the classroom and the inclusion of scholars with diverse backgrounds and handicaps is a new challenge for schools requiring adequate equipment and furniture. The furnishings and installations rarely have kept pace with this development.</p> <p>Besides, the furniture and appliances currently available on the market do not meet the high standards of ecodesign and sustainability criteria, such as closed material circulation or life-cycle-analysis.</p> <p>In the first phase of the project we will analyze the context of education and schools and identify relevant problems. For this purpose field-studies and interviews with various stakeholders will be carried out. Additionally there will be a cooperation with the HfGs ecodesign research team to get insights in their findings.</p> <p>In teams of two or three students, exemplary solutions emphasizing ecological criteria will be developed. The results will be presented in models, simulations and visualisations.</p>
Projects and goals of the course	<p>The students know the essential processes and exemplary methods of ecodesign.</p> <p>They have learnt to identify, frame and analyze a problem of advanced complexity and to work on it with a designerly approach and a structured design process.</p> <p>They can visualize, present and document their results.</p>
Course assessment	<p>Concept, visualization, model, and documentation.</p> <p>Regular attendance, presentation and submission of the results.</p>
Does the course have a more practical or theoretical focus?	<p>Mostly practical</p>

Course descriptions: Product Design

Process Design 2 (7 ECTS) | Ivo Geissner - English

What is the content of the course?	<p>“bicycle + transportation”</p> <p>The students task is to analyze existing delivery systems, methods of transporting goods and corresponding transport mechanisms pertaining to bicycle use in private and commercial contexts.</p> <p>What mechanisms or ways of transport are particularly effective? During the analysis the student should pay special attention to the handling, safety, amount of storing space and the comfort of the vehicles.</p>
Course assessment	<p>The students are then responsible for their own project, where they will improve existing mechanisms, vehicles and logistical processes based on their observations and their analysis.</p>
Does the course have a more practical or theoretical focus?	<p>Mostly practical</p>

Course descriptions: Product Design

Typographical Basics (4 ECTS) | Davide Durante - German and English

What is the content of the course?

In the course „Typography Basics“ the students learn the basics, importance, formation, development and application of typography. Students get an insight into the history of writing and learn how to classify fonts into appropriate style groups.

Projects and goals of the course

Students develop a sense for typographic elements such as letter, word, line or column in relation to the surface surrounding them. In the course essential rules of typography will be learned and targeted by exercises. The processing of increasingly complex and successive design tasks aims to explore the possibilities and effects of dealing with writing and to sharpen the typographic perception. Students also systematically expand their knowledge by critically reflecting on their own designs.

Does the course have a more practical or theoretical focus?

Mostly theoretical

Course descriptions: Product Design

CAD2 - Solidworks (2 ECTS) | Gerd Burchard - German and English

What is the content of the course?	Students learn the basics of CAD software Solid Works. You will develop and construct various objects. First you will do some examples with the group and learn some tools and all the functions of the programme. Later on you will work on your own final projects and can ask the teacher individual questions. The course is also suitable for beginners.
Projects and goals of the course	Being able to render various common everyday items and do detailed replica of a self-chosen everyday object in Solid Works. The object is going to be assembled as several components and will be set together afterwards.
What programs are used?	Solidworks
What is required? (materials, tools...)	Computer and programmes are provided from the school during the time period of the course.
Does the course have a more practical or theoretical focus?	Practical

Course descriptions: Product Design

CAD4 - Rhino Advanced (2 ECTS) | Christian Jagdhuber - English

What is the content of the course?	<p>Rhino is one of the most affordable, versatile and innovative free-form CAD Modeller on today's market. It enjoys great popularity in the whole industry, especially in architecture and design.</p> <p>Rhino enables you to create, edit and analyse any kind of NURBS geometry. There are no limits on complexity, degree, or size. It is fast, highly accessible, very adaptable and leading in cross-platform compatibility. It is an amazing interface for drafting, design-engineering and digital fabrication. Rhino also offers a vast range of highly specialized tools and plug-ins for all sorts of design tasks, many fields of scientific operations and simulations, manufacturing processes and trendsetting technologies. For ambitious users it is worth mentioning the latest open source add-on, grasshopper, deepening your abilities in computing generative and parametric shapes and structures.</p>
Projects and goals of the course	<p>The lecture is a practical guide to learn, understand and implement the most important basics and advanced techniques to achieve all your needed results in the present and future from sketch to fabrication. We will briefly recap the user interface, examine the settings, overview all tools and operations and then accelerate into the most essential advanced free-form modelling techniques and hidden tricks. All lessons will be guided by examples of use to understand the procedural methods. Our aim is to give you the abilities and self-assurance to realise any task or project without any restraint always keeping in mind your personal long-term development.</p>
What programs are used?	Rhino
Does the course have a more practical or theoretical focus?	Practical

Course descriptions: Product Design

Grasshopper - Advanced (2 ECTS) | Christian Jagdhuber - English

What is the content of the course?	<p>The course teaches methods and skills for digital presentation and presentation of idea structures in the context of project realization. At first fundamental concepts of drawing are deepened. Presentation and technical introduction to the digital tools used (currently: Wacom Board, Photoshop ...).</p> <p>The student will be involved in the coordination and motor processes of digital design. Basis will be analog or digitally generated line drawings in view and perspective. They form the technical, constructive substructure for the later representation. Information visualization.</p>
Projects and goals of the course	<p>General skills merge. Students should combine the benefits of analog rendering with digital skills. They should be able to visually optimize things, to recognize and implement, to develop aesthetic sensitivity, learn to evaluate and to optimize their abilities for abstraction.</p> <p>After completing the course, the student is able to/work in the field of:</p> <ul style="list-style-type: none">- digital creation of idea structures- Controlled to work with 2D programs- Coordinated handling of digital drawing tools (Wacom Board)- differentiation - which quality in which phase- Student creates picture that gives a clear statement to the properties of the product- Use design resources purposefully- Presents secure, digitally supported facts <p>Types of tasks:</p> <ul style="list-style-type: none">- Draw objects directly on the Wacom board- Pull through layouts- Create layouts digitally- Area modulation / image processing effects- Execution of structure and function- Execution of material and structure- Structure layout - means split into several work levels- Maintain coordination of work steps / sequence (e.g. structure)
What programs are used?	Grasshopper (requirement: knowledge in CAD1 and CAD4)
Course assessment	<p>Presence, cooperation, documentation</p> <p>Evaluation criteria: quality of presentation, discipline in the implementation and further development</p> <p>Transferable skills: The skills taught in the course are related to more complex digital media and the analog part of design. Digital created conceptual designs serve as a template for model construction and construction.</p>
Does the course have a more practical or theoretical focus?	Practical

Course descriptions: Product Design

Rendering 4 (2 ECTS) (digital) | Benjamin Baumhauer - English

What is the content of the course?	The students will learn how to sketch, illustrate and render in photoshop by using the Wacom Board. They will get an introduction in basic sketching skills such as perspectives, proportion, drawing a proper line, light and shadow and surfaces as well as using colours properly. They will learn how to use a wacom board and how to set up a photoshop file, then how to do layer management and use special photophop effects and how to create a brush.
Projects and goals of the course	Goal is to sharpen the students realistic drawing skills and teach them how to do the perfect drawing process. They will transfer inspirations into an idea and then into digital images.
What programs are used?	Wacom and Photophop
What is required? (materials, tools...)	Computer, Wacom Board and programs are provided by the school for the time period of the course.
Does the course have a more practical or theoretical focus?	Practical

Course descriptions: Product Design

Product Photography (2 ECTS) | Jens Werlein - English

What is the content of the course?	Photography of products (inside and outside) which includes: brainstorming, product selection, background selection, creation of a photo concept, implementation, design, professional lighting, editing of the photos and presentation for web and print.
Projects and goals of the course	Independent and professional photography for own future products. Creation of outstanding prints in various formats.
What programs are used?	Photoshop
What is required? (materials, tools...)	-
Does the course have a more practical or theoretical focus?	Practical

Course descriptions: Product design

Ceramics (2 ECTS) | Volkmar Meyer-Schönbohm - English

What is the content of the course?	<p>“As a drinking vessel arises.” From the idea to a finished product. The students will start with building a plastermodel to then transform it into a ceramic object.</p> <p>Note: Maximum number of participants 4 groups with two students.</p>
Projects and goals of the course	<p>Goal of the course is to give you a basic feeling on how to do ceramics. Project will be a cup for hot- or cold beverages from high quality stoneware.</p>
What programs are used?	<p>None.</p>
What is required? (materials, tools...)	<p>Materials will be provided by the school.</p>
Does the course have a more practical or theoretical focus?	<p>Practical</p>
Additional Information	<p>The course „ceramics“ is only available for product design students. It starts on October 24th from 13:30-15:00.</p> <p>The second course date is October 31st from 13:30-15:00.</p> <p>After that the course takes place every Thursday from 13:30-15:00 at least. You are asked to stay longer in order to work on your project or come on Monday mornings/afternoons in order to finish your project.</p>

Course descriptions: Product design

Clay (2 ECTS) | Volkmar Meyer-Schönbohm - English

What is the content of the course?	Implementation of simple and complex surfaces and an abstract form
Projects and goals of the course	Goal of the course is to give you a basic feeling on how to work with clay.
What programs are used?	None.
What is required? (materials, tools...)	Materials will be provided by the school.
Does the course have a more practical or theoretical focus?	Practical
Additional Information	<p>The course „clay“ is available for product design students who don't attend „ceramics“ and for communication and interaction design students.</p> <p>It starts on October 24th from 15:00-16:30.</p> <p>The second course date is October 31st from 15:00-16:30.</p> <p>After that the course takes place every Monday from 13:30-15:00.</p>

Course descriptions: Product Design

Cinema 4D (2 ECTS) | Benjamin Funk - English

What is the content of the course?	First the students will get to know the basics of how to build something in Cinema 4D. They will learn how to form something, to animate and render it. Also they will learn about Expresso Tags and other fun tools you can find in Cinema 4D. Not everything is product based, they will also learn how to animate abstract moving shapes.
Projects and goals of the course	Goal is to give the students a basic idea on how Cinema 4D work, how you can build something, animate and render it. As a final project you can most likely pick something yourself. If you have a project with a product, which is already built in another CAD programme you can import, animate and render it. If you have nothing yet you are free to build whatever you want in Cinema or another CAD programme and then animate and render it in Cinema 4D.
What programs are used?	Cinema 4D and maybe Rhino or Solid Works to build a model for the final project, which is to be uploaded in Cinema 4D to be animated and rendered.
What is required? (materials, tools...)	Computer and programs are provided by the school for the time period of the course.
Does the course have a more practical or theoretical focus?	Mostly Practical

Course descriptions: Product Design

Design & Media History (2 ECTS) | Michael Burke - English

What is the content of the course?	<p>Lecture series „History of Design“ with the focus on the 20th century.</p> <p>Mediation of the historical context of design history, as well as the international development of modern design.</p> <p>Origins of the Bauhaus Weimar, the Russian Constructivism (Vkhutemas school Moscow) and the Bauhaus Dessau, as well as the „Elementary Typography“ of the 20s.</p> <p>Insight into the American design school, as well as influence of the Swiss Graphics in the 50s/60s at the HfG Ulm and on their development groups.</p> <p>Appearance of the company Braun, the airline Lufthansa and the Munich Olympics 1972.</p> <p>International examples: total design Amsterdam, Charles and Ray Eames (an American design bureau).</p>
Course assessment	At the end of the lecture series: a small presentation by the students
Does the course have a more practical or theoretical focus?	Theoretical

Course descriptions: Communication Design

Typo/Image/Layout (5 ECTS) | Prof. Daniel Utz, Nadine Villani in cooperation with Image 2 (2 ECTS) - German and English

What is the content of the course? You learn the basics of typography in a layout and the design of applications or magazines. The subjects typography, photography and media technology can work in a cooperation for one big project.

Projects and goals of the course You make up to three separate and independent projects or sometimes one big project with all the themes. In media technology you program a website using HTML, CSS and Javascript. In typography, which is always in cooperation with photography, you will do a bit of theory at the beginning and after that a practical project. This can be the design of some kind of information, for example a brochure, magazine or a poster. You get skills in layouting and editorial design, in photography and in HTML / CSS / Javascript.

What programs are used? Illustrator, InDesign, Photoshop, Atom or Sublime

Does the course have a more practical or theoretical focus? Practical

Typo/Image/Layout and Image 2 are based on each other.

Course descriptions: Communication Design

Image 2 (2 ECTS) | Andreas Langen - German and English

What is the content of the course?	Photography for the course Typo/Image/Layout.
Projects and goals of the course	The course deals with visual language, image development and image analysis.
What is required? (materials, tools...)	Please bring your own camera if you have one.
Does the course have a more practical or theoretical focus?	Practical

Typo/Image/Layout and Image 2 are based on each other.

Course descriptions: Communication Design

Audiovisual Design (6 ECTS) | Prof. Michael Götte, Veldana Sehic in cooperation with Simulation 2 (2 ECTS) - Predominantly English

What is the content of the course?	You will do analytical sound research and combine sounds with abstract or geometric forms. You will make a movie from your project at the end of the semester.
Projects and goals of the course	Students have far-reaching design basic knowledge of the different dimension categories, that will give you analytical, methodological and discursive skills in design processes in static and dynamic media. They develop confidence in dealing with the subject-specific theory and its terminology and feature a wide range of creative methods and strategies. You will have the basics for the requirements of application-oriented creative questions in disciplinary as interdisciplinary questions.
What programs are used?	After effects, Illustrator, Cinema 4D
What is required? (materials, tools...)	You need to work on a computer.
Does the course have a more practical or theoretical focus?	Mostly practical.

Audiovisual Design and Simulation 2 are based on each other.

Course descriptions: Communication Design

Simulation 1 and 2 (2 ECTS) | Claudius Schulz - Predominantly English

What is the content of the course?	In Simulation 1 you learn the based learnings of simulation in AfterEffects, in Simulation 2 the advanced basics.
Projects and goals of the course	<p>In Simulation 1 you make a small movie, for example animating a ball. It's a really small project which you can do in class.</p> <p>In Simulation 2 you implemente an App-concept from either the visualising models or knowledge organisation courses. This project is a bit bigger than simulation 1.</p>
What programs are used?	After Effects
What is required? (materials, tools...)	none
Does the course have a more practical or theoretical focus?	theoretical

Audiovisual Design and Simulation 2 are based on each other.

Course descriptions: Communication Design

Information Visualisation (6 ECTS) | Prof. Ulrich Schendzielorz

What is the content of the course?

drawdown.org

Typography forms the basic framework of this course, the emphasis lies however in getting to know and using different visualization models:

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

As part of the project work complex issues are presented and clearly arranged with the help of graphical presentations.

Thanks to Greta Thunberg and „Fridays for Future“, the climate crisis is at the center of attention. A majority of the population is aware of the problem, but knowledge about concrete solutions is still missing: „We have the technology we need. We can start now.“ (Margarethe Vestager, EU-Commissioner)

On drawdown.org one hundred measures and techniques are presented to reduce CO2 emissions globally. Unfortunately, all topics are almost exclusively in text form - that's why we are required as information designers.

Organize in project groups (2-3 people) and look for a drawdown theme and explain it excitingly and visually attractive. The application/ final project will be a booklet or an animation/video.

Projects and goals of the course

Formal elaboration: develop page layouts and define typography, colors and design grid. The digital application can either be an interactive prototype or exemplarily implemented as an animation sequence.

Learnings and results

- brochure: 12 pages, size 350 × 500 mm (English)
- Digital medium: video, animation or interactive mediation of the topic (english)
- documentation

Course assessment

- Analysis, conceptual development, creative execution
- Quality of dummies and prototypes
- Presentation and documentation of the design process

Does the course have a more practical or theoretical focus?

The course has a practical focus.

Course descriptions: Communication Design

Info System in Space/Orientation Systems (8 ECTS) | Prof. Jürgen Hoffmann - English

What is the content of the course?	Signage systems in a 2- or 3-dimensional environment. We will develop a wayfinding/information system with the goal to simplify multilayered instructions and information, to make it easily understood and projected into a spatial context. In particular we analyse the specific usage, the spacial relationship and structure and the specific information context at various key points. Other factors are distance, indoor/outdoor, light availability, analog or digital, frequency, near and far, materials and barrier free.
Projects and goals of the course	Language, pictograms and colours are basic building blocks of a information/signage system, whereby the human being stays, as the determining factor, in the center of a functional wayfinding system. The focus on the user, a logical and systematic approach are the dominating factors for understanding and orientation.
Learnings and results	To develop a design proposal/direction using colour coding, pictograms, typography, plan/diagram and to design the final concept for different materials and media. Result of analyses, design quality, conceptual development, presentation (prototype) and documentation.
What is required? (materials, tools...)	You don't need extra material.
Does the course have a more practical or theoretical focus?	The course has a practical focus.

Course descriptions: Communication Design

Information Systems (8 ECTS) | Prof. Ulrich Schendzielorz, Stefan Kraiss

What is the content of the course?

Teaching and Learning with digital media

In the joint compact seminar „knowledge transfer“ students of the HfG and the University of Education Schwäbisch Gmünd will plan and create a digital teaching-learning environment or digital teaching-learning media.

The seminar introduces fundamental contents to the theory of teaching and learning with digital media. At a glance, models of visualization will be introduced in the context of character and cognitive theories as well as basic principles of visual thinking.

Especially didactic knowledge transfer with modern digital media will be discussed. The practical implementation is about the exemplary development of a didactic communication product based on digital media. Digital media are tablet and smartphone apps, interactive whitboards, big screens and so-called educational robots. The connection of virtual and physical world also plays an essential role.

Projects and goals of the course

Students acquire knowledge about models and methods of teaching and learning by creating didactic communication products. They explore contemporary possibilities of medial knowledge transfer and get an outlook on future forms of learning.

In joint workshops existing teaching-learning environments or media will be researched and analyzed. Current and future media technologies will be presented and possible applications will be shown. In interdisciplinary working groups (PH | HfG) the topic will be developed and defined at the beginning of the project. After common analysis and development of didactic concepts, the project groups design independent solutions which will be elaborated and prototypically implemented until the end of the semester.

Learnings and results

Central concerns of the seminar are harmonious design-didactic concepts for digital knowledge transfer and their prototypical implementation. Depending on the concept and medium different tools can be used.

Does the course have a more practical or theoretical focus?

The course has a practical focus.

Course descriptions: Communication Design

Web (8 ECTS) | Prof. Andreas Koller, Prof. Daniel Utz - English

What is the content of the course?

Digital exhibition catalog:
For every major exhibition there is a catalog - in the form of a thick pile of paper. On the other hand, there are only a few exhibition contents available on the internet, and they are usually lovelessly presented on generic websites. We do not consider this up-to-date anymore. Therefore, the introductory question in the winter semester is:

What should a digital exhibition catalog ideally look like?
Based on „real“ exhibitions and the associated print catalogs, we will develop concepts and designs for web-based catalogs. Subject of the project are current or past exhibitions in the fields of culture, history, nature, technology or politics.

Projects and goals of the course

The bar for typography and layout is now as high on the Web as it is in book design: Web fonts and OpenType features are now standard, as are responsive grids for different screens and devices. The web also offers design options such as animation, moving images, interactive and dynamic forms of presentation. All of this will be dealt with in the course.
The main focus of the course is how the potential of the medium web can be used for the immersive communication of contents. The goal is to think beyond standard templates and develop innovative formats to convey complex topics in an exciting way.
And finally, it's about information design: how can intuitive navigation work within a collection or topic? How can the content and the context of an exhibition be visualized and graphically presented and documented?

Learnings and results/
What programs are used?

The catalog concepts are implemented as interactive prototypes. For this, current tools such as Sketch, Framer or InVision are used. In addition to a deeper understanding of the design process (iterative prototyping, design systems, pattern libraries) and technical contexts (HTML, CSS, JavaScript), typography and layout as well as knowledge transfer in digital media are in the foreground

Course assessment

Analysis, conceptual development, creative execution, quality of prototypes, result poster, presentation and documentation of the design process

Course descriptions: Communication Design

Interface Design (8 ECTS) | Dominik Witzke - German and English User- and experience centered software design in a given subject area

What is the content of the course?	<ul style="list-style-type: none">- Methods for the development of graphical interfaces, interaction models, information architecture and in-/output devices- Basics of user experience design- Introduction to design, presentation, and simulation tools and their theoretical and practical application- Dealing with Graphical User Interfaces Guidelines on different platforms- Theory of action logic, function structure and orientation of the user in the system- Design variants and their evaluation (visual design, information architecture and interaction design) as well as methods for prototypical realization- Imparting of interaction principles- Trends and future outlooks <p>Based on an assigned topic sequences and possibly existing applications will be analyzed. After the contextual analysis and research phase, the students will generate ideas for future solutions. With the help of user research methods, requirements for future software will be developed and defined.</p> <p>Also design methods will be applied and used for creating an iterative design process. In the final phase the interface will be realized prototypically with easy to use prototyping tools.</p>
Projects and goals of the course	<p>The primary aim is the leaning of design methods that are fundamental for the development of user and experience centered software. Many essential factors of interface design will be conveyed with the involvement of conceptual, technical and design aspects. The Aim is to provide technical and theoretical methods for the analysis, development and design of user interfaces.</p> <p>The students acquire knowledge about conception and composition of user interfaces and other basic interaction principles.</p>
Learnings and results	<p>The result of the course is a prototypical realization of a digital application (eg. smartphone or tablet). Depending of the concept and medium, the kind of implementation can be distinct differently. Either the application can be simulated or implemented as an interactive prototype. The developed concept of the software, the use of design techniques, the conceptual and design quality of the prototypes as well as the quality of the final presentation and the project documentation are the basics of the assessment.</p>
Does the course have a more practical or theoretical focus?	<p>The theoretical part is on focus.</p>

Course descriptions: Communication Design

Transmedial Design (8 ECTS) | R. Heinrich - German and English

What is the content of the course?	<p>The deficient visual identity of an existing organisation/institution working in a social, cultural or scientific area needs to be redesigned fundamentally.</p> <p>The organisation/institution will be picked out and researched by the students themselves.</p> <p>The chosen organisation/institution should have a non-profit orientation – however it does not necessarily need to be a non-profit-organisation.</p> <p>Examples of such organisations or institutions can be e.g.: social organisations, research and beneficial institutions, clubs, hospitals, municipal, public organisations or facilities of the state/land like theaters, museums, libraries etc. or temporary exhibitions of such an institution or museum.</p>
Projects and goals of the course	<p>Primarily as much information as possible of the chosen organisation/institution will be collected. This also includes the gathering of facts about how design questions and processes are dealt with. Based on this knowledge the existing appearance/performance and the communication need to be analysed and rated critically.</p> <ul style="list-style-type: none">• Which function has the organisation/institution and how is it positioned?• Which target group is in the focal point?• Which media channels and formats are used to communicate?• Are the existing communication channels used in an efficient way?• Which aspects stand out positively, where are recognizable deficiencies?• Which requirements are coming up for the new visual identity? <p>Based on these answers, several possible design approaches will be developed.</p> <p>The interaction of the chosen design parameters within different applications and media will be reviewed. In the end a design direction will be worked out containing defined rules to guarantee a consistent corporate design. The developed design principles need to be presented with sample applications (DIN A1 charts). Also a styleguide plus a design derivation needs to be handed in. Students are welcome to work in teams of 2 or 3 persons.</p>
Learnings and results	<p>The mediation of the function and objective of a design performance within the corporate identity, practical and theoretical knowledge about design.</p> <p>Beside the practical task the course consists out of theory lessons and essays.</p>
Does the course have a more practical or theoretical focus?	<p>The focus is on the practical part.</p>

Course descriptions: Interaction Design

Interactive communication systems 1 (5 ECTS) | Fabian Schröbel - German and English

What is the content of the course?	Conceptualization and development of an interactive system, which informs a user about a specific topic, focussing on structural as well as visual aspects during the design process. Usecases for these products are mostly set in exhibition or museum environments.
Projects and goals of the course	Development of a structured and user-friendly concept and screen designs of the final product. Interactive prototypes are often used to demonstrate the system, though videos are also an option.
What programs are used?	The students are free to use whatever software they desire, though understanding of screen-design software (Adobe suite, Sketch, ...) is required.
Does the course have a more practical or theoretical focus?	Screen-design software, possibly animation-software, prototyping-software or programming languages to develop an interactive prototype.
What is required? (materials, tools...)	Mostly practical. After a brief theoretical input at the beginning the students work on their projects throughout the semester. Input is given by the lecturer on a weekly base.

Course descriptions: Interaction Design

Interface Design 1 (6 ECTS) | Thomas Techert - German and English

What is the content of the course?	The basics of usability and user friendliness, based on international standards and scientific research, are taught.
Projects and goals of the course	Basic understanding of usability principles and overview of existing standards as well as their understanding.
What programs are used?	None
What is required? (materials, tools...)	None
Does the course have a more practical or theoretical focus?	Mostly practical

Course descriptions: Interaction Design

Application Design 2 (8 ECTS) | Jonathan Bölz - German and English

What is the content of the course?	Ideation, concept, and design of (mobile) applications. Using creativity techniques as well as standard software design methods like process modeling, wireframing, etc. (no programming necessary).
Projects and goals of the course	The final product is a well structured, user-friendly and visually appealing (mobile) application. A prototype of the application is not required, can be helpful for demonstration purposes though.
What programs are used?	Screen-design software (Adobe Suite, Sketch,...) and possibly animation software (After Effects or similar) to create a video of the application. If a prototype is planned appropriate software or coding skills.
Does the course have a more practical or theoretical focus?	A computer to use the software.
What is required? (materials, tools...)	Mostly practical. After a brief theoretical input at the beginning the students work on their projects throughout the semester. Input is given by the lecturer on a weekly base.

Course descriptions: Interaction Design

Audio in Interaction Design (2 ECTS) | Prof. David Oswald - German and English

What is the content of the course?	Develop a sound set for an interactive application that provides users with auditory feedback and information about events, processes, and current state of the software.
Projects and goals of the course	A basic sound set (4-5 sounds) that are either recorded and then edited or created inside a synthesizer.
What programs are used?	Sound recording- and creation software (Audacity, Adobe Audition, Logic Pro,...)
Does the course have a more practical or theoretical focus?	A Computer to work with the mentioned programmes.
What is required? (materials, tools...)	Theoretical introduction to the basics of sound and audio in general, some practical exercises to establish a basic understanding of sound-editing software. Afterwards focus on the creation of the soundsets in groups of two.

Course descriptions: Interaction Design

Invention Design 2 (8 ECTS) | Maik Groß - German and English

What is the content of the course?	Research into upcoming technology and interaction trends. Experiment, simulate and prototype to develop useful and/or narrative (digital) products or novel ways of interaction within different future scenarios. The process is organized into fast iteration loops going quickly from research and concept to prototype.
Projects and goals of the course	Possible outcomes include: <ul style="list-style-type: none">- experimental prototypes that explore alternative ways of interaction. (eg. customized interfaces for disabled people, live audio manipulation with gestures.)- critical products which are telling narratives of possible development in technology or society while leading to better traceability of the product itself. (eg. Do we want a CRISPR-DIY-Home-Kit to manipulate our baby's DNA?)- highly plausible products or upgrades of products solving current problems with upcoming technology that is nearly market-ready. (eg. product which uses 5G connection in every car)- future concepts that focus on solving current or future problems (eg. global warming, medical issues, social issues to mention a few) or improvement of specific situations, for example, how workplaces could benefit from future technology.
What programs are used?	Depending on the type of project different programs and/or skills are required to either prototype the product or animate, communicate, visualize the concept.
Does the course have a more practical or theoretical focus?	Mostly practical. After some theoretical input at the beginning the students work on their projects throughout the semester in a 3 weeks iteration loop (Research, Concept, Prototype). We will dive into prototyping as soon as possible. Input is given by the lecturer on a weekly base.
What is required? (materials, tools...)	No special skills are required, but highly motivated students are appreciated. You will need your own laptop.

Course descriptions: Internet of Things

Visual Prototyping (2 ECTS) | Felix Herrmann - German and English

What is the content of the course?	During this lecture we focus on the basics of digital product design with heavily emphasizing digital prototyping. Starting very low-fidelity with pen and paper, creating paper prototypes, slowly rising the fidelity to mid-fidelity and ending in a fully functional hi-fidelity prototype.
Projects and goals of the course	The goal is that all students understand and internalize the individual steps of design process for digital products. As part of this they should learn about all common prototyping methods and the most common tools.
What programs are used?	POP(Paper Prototyping by Marvel), Sketch, InVision, Adobe XD
What is required? (materials, tools...)	Pen and Paper, Post-Its, Smartphone, Laptop (preferably Mac)
Does the course have a more practical or theoretical focus?	The course is essentially focused on multiple practical exercises and projects, however there is also some theoretical parts. Team work will be required (project teams of 2 students).

Course descriptions: Internet of Things

Basics in Medial Space (4 ECTS) | Bernhard Sacha - German and English

What is the content of the course?	You will learn methods for understanding, analysing and translating complex information into dynamic images with music as an example. The outcome of your project will be applying all the gained knowledge to generate a dynamic and perhaps even interactive animated music visualisation.
Projects and goals of the course	<ul style="list-style-type: none">– understand the use of design methods– learn how gain information and analyse a complex context– finding parameters for translating sound to images– creating a repertoire of visual behavior– generate a dynamic music visualisation using the programming language of your choice
What programs are used?	<ul style="list-style-type: none">– general dtp software– you will chose a programming language suitable for your needs
What is required? (materials, tools...)	<ul style="list-style-type: none">– high interest in audiovisual media.– basic programming skills in the language of your choice.
Does the course have a more practical or theoretical focus?	Practical course

Course descriptions: Internet of Things

Design Thinking (5 ECTS) | Prof. Dr. Ulrich Barnhöfer, Anna Erlewein - German and English

What is the content of the course?

The students learn the basic principles of the design process, in particular the Design Thinking Process.

Design Thinking is a design methodology that provides a solution-based approach to solving problems. It's extremely useful in tackling complex problems that are ill-defined or unknown, by understanding the human needs involved, by re-framing the problem in human-centric ways, by creating many ideas in brainstorming sessions, and by adopting a hands-on approach in prototyping and testing.

Design thinking refers to the cognitive, strategic and practical processes by which design concepts are developed by designers and/or design teams.

Projects and goals of the course

The students learn how to deal with the user-centered method canon. On the basis of a sample project, the students carry out methods of user research and thereby define starting points for their own design.

Does the course have a more practical or theoretical focus?

The course is essentially focused on multiple practical exercises and projects, however there is also some theoretical parts which will be taught predominantly in German.