

Course Catalogue

2021 / 22

German for Internationals (2 ECTS) | Carol Battista - Compulsory course

What is the content of the course?	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)
Project description	Handouts and conversation groups, vocabulary notebook.
Learning objective	Orientation to Schwäbisch Gmünd and German culture. Expansion of previous knowledge of German for intermediate students. Introduction to basic German (A1) and “survival “German
Course assessment	Written exam 90 minutes
Does the course have a more practical or theoretical focus?	Practical focus

Presentation Techniques Workshop (2 ECTS) | Tanya Matefi – Compulsory course

What is the content of the course?	<p>Storytelling. Presenting somebody else. Presenting oneself. (Compulsory presentation) Getting the most out of the voice. Eye-Contact Training. Delegating in a team, contributing in a team. Presenting as a team - supporting each other, making interesting segues. Coping with nerves. (Relaxation exercises.) Using body language, movement, hand gestures and facial expression. The Power of Three - joke telling. Improvised and prepared team presentations. Identifying the core message of a presentation. Strategies for making presentations unique, e.g. finding new perspectives. Final Presentation. (Compulsory presentation)</p>
Project description	<p>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.</p>
Learning objective	<ol style="list-style-type: none">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.
Course assessment	<p>Every presentation is immediately followed by a feedback session. Completion of the course depends on students attending a minimum number of sessions and making 2 compulsory presentations. Verbal feedback is given by the trainer and other participants. Students record their presentation and are encouraged to later watch and assess themselves, and to continue this process of self-assessment at intervals over time, to better gauge their progress in presenting.</p>
Does the course have a more practical or theoretical focus?	<p>Practical focus</p>

Course descriptions: Product Design

17 Global Goals (7 ECTS) | Carmen Hinderberger

What is the content of the course?	<p>„The Sustainable Development Goals (SDGs) are a collection of 17 interlinked global goals designed to be a blueprint to achieve a better and more sustainable future for all. The SDGs were set up in 2015 by the United Nations General Assembly and are intended to be achieved by the year 2030. The 17 SDGs are: 1. No Poverty, 2. Zero Hunger, 3. Good Health and Wellbeing, 4. Quality Education, 5. Gender Equality, 6. Clean Water and Sanitation, 7. Affordable and Clean Energy, 8. Decent Work and Economic Growth, 9. Industry, Innovation and Infrastructure, 10. Reducing Inequality, 11. Sustainable Cities and Communities, 12. Responsible Consumption and Production, 13. Climate Action, 14. Life Below Water, 15. Life On Land, 16. Peace, Justice, and Strong Institutions, 17. Partnerships for the Goals.“ from Wikipedia</p> <p>In this context each student designs a product in one category. Any product can be designed as long it is sustainable and reasonable.</p>
Projects description	<ol style="list-style-type: none">1. Research Presentation of the research results in form of reports and handouts for all students in a given layout.2. Design conception With the help of sketches, renderings and mock-ups a minimum number of 2 designs should be explored and developed. >> Presentation and selection3. 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 1:1 model should be buildt. >> Presentation and documentation
Learnings and results	<p>Classic product design process including the following modules: analysis, strategy, conception, finalisation and presentation. 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>Practical focus</p>

Course descriptions: Product Design

Observer (6 ECTS) | Simon Busse

What is the content of the course?

Productdesign - Ergonomics.

Projects description

In the semester project „OBSERVER“ you will deal with the phenomena and fascinations of nature observation. The distance to our parks and direct surroundings has extremely decreased in the last months and from this a strong attachment to our habitat has grown. Design a solution or accessory to a defined problem that will significantly improve the areas of observation and help the user have a more positive experience, comfort and safety in their environment. Create a 1:1 prototype to give the user an experience or impression of your design.

Learnings and results

Research, modularity 3D models

Course assessment

Documentation of the project via images
Final summary documentation
Illustration / instruction to explain the detailed use of concept
800 - 1200 characters project description
1:1 prototype (authentic materials)
6 images (white background) / 6 images (concept in use)

Does the course have a more practical or theoretical focus?

Practical focus

Course descriptions: Product Design

Process Design 2 (7 ECTS) | Ivo Geissner

What is the content of the course?

“Bicycle + transportation”

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.

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.

Course assessment

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.

Does the course have a more practical or theoretical focus?

Mostly practical focus

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 focus

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 focus

Course descriptions: Product Design

Rhino 6/7 (2 ECTS) | Christian Jagdhuber

What is the content of the course?

The course introduces advanced NURBs architecture and editing (Class A) in addition to providing an in-depth look at complex features, design tools, and software structure. The previous working methodology will be reviewed and replaced by a goal-oriented and efficient workstyle. We learn a professional workflow and form-finding process based on additive, subtractive and integrative, as well as integral techniques. The learning success is supported by *hints and tricks*. Finally, we are able to create complex geometry or "watertight" surface composites with challenging transitions - edit, analyze and troubleshoot them. The goal is to provide ready data for visualization and production.

Prerequisites

Rhino basic course or good knowledge of computer-aided design. Strong self-motivation, independent engagement between course sessions, and regular attendance is mandatory.

Learning objectives

- _Recap of the user interface and key system settings.
- _Safe navigation and the Gumball
- _Customize/individualize toolbars
- _Creating simple macros
- _Using object snaps (advanced)
- _Working with tolerances
- _Using distance and angle constraints with object snaps
- _Edit control points and rebuild curves and surfaces
- _Creating sophisticated curve and surface transitions
- _User-defined construction planes
- _Placing objects on surfaces
- _Create 3D models from 2D drawings and scanned images
- _Working with solids and tools (focus on Boolean operations and edge processing)
- _Working with curves and tools
- _Working with surfaces and tools
- _Freeform surface modeling, control point machining, NURBS
- _Curve and surface reconstruction or smoothing
- _Manage challenging transitions in polycurves and surfaces
- _Analyze continuity and curve and surface curvature

Does the course have a more practical or theoretical focus?

Practical focus

Course descriptions: Product Design

Grasshopper (2 ECTS) | Christian Jagdhuber - English

What is the content of the course?	The course provides practical and conceptual skills in working with parametric models in Grasshopper. We will learn step-by-step how to handle the different data types and how to process them, and practical examples will enable us to design basic parametric models ourselves.
Prerequisite	Rhino 6 basic knowledge (user interface, navigation, handling of NURBS geometry) or good knowledge in similarly structured programs; not suitable for advanced users and programmers! Regular attendance and dedicated participation is a basic requirement.
Learning objectives	After completing the course, the student is able to/work in the field of: _Getting to know the visual programming interface. _Functional principle of graphical programming in Rhino 6 with Grasshopper _What is Algorithmic Thinking? _Methodology and form finding _Application areas _Basic knowledge of creating, processing, manipulating, and managing generative ("living") data. _Learn and apply the most important Grasshopper tools for designers _Outlook (Design follows Function?!) _Practical exercises
Course assessment	Presence, cooperation, documentation Evaluation criteria: quality of presentation, discipline in the implementation and further development 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.
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Product Design

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

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 focus

Course descriptions: Product Design

Cinema 4D (2 ECTS) | Benjamin Funk

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 no- thing yet you are free to build whatever you want in Cinema or ano- ther 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 focus

Course descriptions: Product Design

Drawing 2/rendering (2 ECTS) | Alexander Ott

What is the content of the course?	<p>Drawing II conveys skills for the graphical implementation of idea structures in the context of Product Design. The course describes drawing as a creative tool and as a means of interdisciplinary communication of facts.</p> <p>In this course, the fundamentals of the representational drawing are first taught and expanded. The topics are the basic layout of a representation, perspective structure, proportion, stroke, light and shadow, surfaces, as well as the deliberate use of colors.</p> <p>At first you will work uniformly in the given contexts. Development of sketches as drawing views and perspective as pure line drawings. A practical introduction to various surface modulation media follows. Therefore, the innovative process is stimulated by a creative task that brings together graphic and creative forces.</p>
Learning outcomes	<p>The participants get to know the possibilities and methods of creative drawing. They are introduced to analytical and independent work. In addition, personal skills are developed and increased.</p>
Course assessment	<p>It is a documentation with a fixed deadline to create, the content and scope of which are described in the course. Without examination - Grade 5. Participation is only possible once. Only registered students are eligible to participate.</p>
Does the course have a more practical or theoretical focus?	<p>Practical focus</p>

Course descriptions: Product Design

Drawing 3 (2 ECTS) | Alexander Ott

What is the content of the course?	<p>The course imparts methods and skills for the digital representation and presentation of idea structures in the context of project implementation. First, the basic concepts of drafting drawing are deepened. Presentation and technical introduction to the digital tools used (currently: Wacom Board, Photoshop CC) The student is introduced to the coordinative and motoric processes of digital representation. The working basis is provided by analogue or digitally generated line drawings in view and perspective. They form the technical, constructive substructure for the later presentation. Training goals: General skills merge. Students should combine the advantages of analog drawing (rendering) with those of digital. They should recognize and implement the possibilities for the visual optimization of facts, develop aesthetic sensitivity, i.e. learn to evaluate and optimize their abilities to abstract.</p>
Learning outcomes	<p>At the end of the course, the student will be able to:</p> <ul style="list-style-type: none">-For the digital creation of idea structures-Working with 2D programs in a controlled manner-Coordinated use of digital drawing tools (current, Wacom Board)-To differentiation - which quality in which phase-Student creates representations that make a clear statement to the properties of the product-Uses creative means in a targeted manner. <p>Task types:</p> <ul style="list-style-type: none">-Draw objects directly on the Wacom Board-Draw the layouts-Area modulation-Execution of structures /textures-Structuring the layout means dividing it into several working levels-Adhere to the coordination of work steps / sequence (e.g. area in front of structure)
Course assessment	<p>Attendance, participation, documentation, results of the exercises.</p>
Does the course have a more practical or theoretical focus?	<p>Practical focus</p>

Course descriptions: Product Design

Function follows form (6 ECTS) | Benjamin Brüssing

What is the content of the course? "Function follows form". The reversal of the famous quote by the American architect Louis Henry Sullivan ("form follows function") forms the starting point of the task

Project description The scope for use is open and undefined. The result should be a product with practical application benefits (e.g. furniture, lighting systems, office and residential accessories, architecture, toys, etc.). The design process is to be illustrated in a documentation and the final product is to be visualized in a model.

Learning objectives Intensive and experimental engagement with 2- and 3-dimensional structures. These are generated by combinations or through-rings n of geometric primitives within 2- and 3-dimensional grid structures. Practical implementation of product designs through different manufacturing and manufacturing processes.

Course assessment Project work (individual or group processing) Theme issue Briefing, explanation on the subject, research concepts, sketches CAD design, pre-models Elaboration final design implementation Model building presentation

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

Course descriptions: Product Design

Stationary Touchpoints (7 ECTS) | Claudio Wolfring

What is the content of the course? The overarching theme of the seminar is a strategic approach to the role of stationary retail in times of booming online trade. Students will define the role of stationary touchpoints within a holistic, consumer centered brand retail strategy

Project description Develop a retail strategy defining the role of stationary touchpoints in times of booming online trade.

Learning and results The seminar performance consists of a final presentation depicting the respective process-based retail strategy with its derivation, approach and benefits. This does not involve a design creation, but rather an outline of the process with the help of mood pictures, etc.

Learning objectives Aim is to develop a retail strategy for a consistent brand perception throughout all customer touchpoints. From an Omni channel perspective, it interlinks the stationary touchpoints with the digital ones creating a seamless customer experience. Students will develop their strategies in groups of 3 participants. Each group will develop a strategy for a brand, to be chosen from the consumer electronics, cosmetics and outdoor/sports sectors.

Course assessment Two intermediate presentations of 15 minutes each
Analysis of the presentation and discussion (regarding presentation techniques)

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

Course descriptions: Product Design

User-centered service design (7 ECTS) | Sebastian F. Müller

What is the content of the course?	Design of user-centered services based on Narrow-AI (NAI)
Project description	<p>During the project we will address the following topics:</p> <ul style="list-style-type: none">What does AI mean for the work of designers in practice?Ideation of services based on AI (using SparkCanvas method)Prototyping/mock-ups of AI-based servicesFeedback sessions with design experts in the field of AI <p>During the project we will work in teams of 3-4 persons.</p>
Learning objectives	<p>Artificial intelligence is one of the most promising technologies we are already confronted with in our everyday work as designers. Today's services are rarely based on a pure human-to-human interaction (e.g. in a bank branch), but human-machine interactions dominate our everyday life, which is based on the use of digital services.</p> <p>In the process, almost unnoticed in the background, AI, or Narrow-AI (NAI), is taking on an increasingly strong role, from smart suggestions in search engines to advanced driver assistance systems.</p> <p>For this reason, it is important for designers today to understand the basics of AI and be able to integrate it into the design process. AI is one of many techniques that helps us as designers realize great services. However, like all technologies, AI should never be used purely as an end in itself. The needs, desires, and challenges of people should always come first, before the use of any technology.</p> <p>Therefore, in this project, we will look at AI as an enabler for implementing a customer-centric service.</p> <p>The goal is to learn the basics for designing services based on AI in a practical way. By the end of the semester, a concept for a new service in which AI plays a relevant role as an enabling technology should have been designed.</p>
Course assessment	<p>Final presentation and documentation</p> <p>Creating drafts and prototypes</p>
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Product Design

Product design 3 (6 ECTS) | Stefan Lippert

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?

Mostly practical focus

Course descriptions: Product Design

Reforestation (7 ECTS) | Alexander Hess

What is the content of the course?

There are many different approaches to reforesting forests, each of which is associated with product solutions. With the help of drones, simple and efficient planting of seedlings by private forest owners with hole spades and bite protection, fencing in game-safe zones in which large-scale planting is carried out by the forest authorities or monocultures that could be planted with agricultural robots. But initiatives in the urban environment are also trying to bring trees back into the cityscape, because trees strengthen social interaction, provide better air, provide space for children, ensure a better quality of life and sharpen our awareness of how to treat nature well.

Projects description

Design and develop an emotionally touching product or system that inspires and motivates the user to sow or plant trees and simplify, facilitate or make the process significantly more effective. The concepts can be developed for both large-scale and small local applications. Every tree counts or every tree planted can make one proud and happier and every tree that can be planted faster and more safely through a product, system or process is a benefit for the community or the individual planter.

Course assessment

Project work and final presentation

Does the course have a more practical or theoretical focus?

Mostly practical focus

Course descriptions: Communication Design

History of Design Media 2 (2 ECTS) | Michael Burke

What is the content of the course?

Lecture series „History of Design“ with the focus on the 20th century. Mediation of the historical context of design history, as well as the international development of modern design. Origins of the Bauhaus Weimar, the Russian Constructivism (Vkhutemas school Moscow) and the Bauhaus Dessau, as well as the „Elementary Typography“ of the 20s. 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. Appearance of the company Braun, the airline Lufthansa and the Munich Olympics 1972. International examples: total design Amsterdam, Charles and Ray Eames (an American design bureau).

Course assessment

At the end of the lecture series: a small presentation by the student

Does the course have a more practical or theoretical focus?

Theoretical focus

Course descriptions: Communication Design

Information Design (8 ECTS) | Dodo Vögler

What is the content
of the course?

Will be uploaded soon

Project description

Does the course have a
more practical or
theoretical focus?

Practical focus

Course descriptions: Communication Design

Information Design (5 ECTS) | Prof. Daniel Utz

What is the content of the course?	Building on the basics in typography and layout, this course will focus on the fundamentals of information design. Typography provides the necessary basic framework, but the focus is on getting to know and applying different visualization models: - Diagrams and data visualizations - Infographics, illustrations and functional representations - Icons and pictograms - Maps and timelines
Projects description	As part of the project work, complex topics are told in an exciting way and clearly presented with the help of graphic representations. Dynamic media and explanatory films are used to convey content compactly and effectively. The viewer gets a faster and more immediate access than with a purely text-based information transfer.
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?	Practical focus

Course descriptions: Communication Design

Web (8 ECTS) | Prof. Daniel Utz

What is the content of the course?	Whether blogs or news sites, online archives or platforms: The web has become the central information and communication medium. The focus of the course is to exploit the potential of the web as a medium and to use it for the immersive communication of content. The goal is to think beyond standard templates and develop innovative formats to convey complex topics in an exciting way and make them accessible.
Project description	Research and structuring The project starts with a broad research on the chosen topic. This should include research across all media: Books, for example, are excellent sources for large amounts of well-prepared content. The content is then analyzed and structured. The following tools are helpful: mind maps and diagrams, visual mappings, priority guides. Conception Based on a run through of the information system, different page types are developed: start page, different overview pages, detailed views. Different organization and visualization models are used. Layout On the web, content is no longer bound to a fixed form, but is prepared flexibly in dynamic layouts for different end devices (from smartphones to tablets to large displays). Therefore, layouts must be thought and developed responsively. Navigation Based on the layout approaches, the usability of the website is developed. The following questions are central to this: According to which criteria can information be arranged? How many levels of detail make sense? Which tools can be used for filtering, sorting and viewing? What amount of information is at all readable and digestible at a glance? Tools / patterns: scrolling, fading in and out ... Prototyping Depending on the project requirements, current tools such as Webflow, Figma or Adobe XD are used for prototyping. Coding yourself is explicitly desired and also part of the course. Prototyping should be iterative and start during the conception phase. Design System After defining the design basics (typography, color, layout elements, components), we develop design systems that are modular and flexible, yet consistent and recognizable.
What programs are used?	
Course assessment	Interactive prototype / screencast, presentation and documentation
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Communication Design

Editorial (8 ECTS) | Prof. Jürgen Hoffmann

What is the content of the course?	Right, left, straight ahead, around the corner or maybe up or down signage systems in a 2-or 3-dimensional environment Project description: 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 spacial context.
Project description	We will have a look at existing projects and try to figure out, how to improve your project and workflow with basic UX rules.
Learning objectives	We analyse and assess the existing signage system and from that develop a new concept and new design parameters. In particular we analyze the specific usage, the spacial relationship and structure and the specific information context at various key points. Other factors could be distance, indoor/outdoor, light availability, analog or digital, frequency, near or far, barrier free and materials. language, pictograms and colors are basic building blocks of an information/ signage system, whereby the human being always is the determining factor in the center of a functional wayfaring system. The focus on the user, a logical and systematic approach are dominating factors for understanding and orientation.
Learning and results	Language, pictograms and colors are basic building blocks of an information/ signage system, whereby the human being always is the determining factor in the center of a functional wayfaring system. The focus on the user, a logical and systematic approach are dominating factors for understanding and orientation.
Course assessment	Participation, presentation of the end results
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Interaction Design

Interactive Communication System (8 ECTS) | Fabian Schröbel

What is the content of the course?	Interactive exhibits.
Project description	Design of data visualization and communication systems for knowledge transfer in the context of exhibitions and museums. Dealing with basic forms of interaction and with media-specific design problems, information architecture, narrative structure, relationship of text, image and animation and prototyping or simulation.
Learning objectives	<ul style="list-style-type: none">→ Storytelling→ Interface Design→ Navigation Design→ Data- & Infographics→ Visual Design→ Layout and Typography→ Prototyping and Simulation→ Design Process & Documentation→ Effective Team Collaboration
Course assessment	Final result / Prototype, presentation, documentation
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Interaction Design

Invention Design II (8 ECTS) | Ludwig Kannicht

What is the content of the course?	<p>In 'Invention Design II' you will work on a very open design project. We search for meaningful use cases for cutting edge technologies. In project groups, we work within a guided design sprint, we will use qualitative and quantitative research methods and we will apply user-centered and technology-centered approaches to designing new products.</p> <p>What if machines begin to understand language? What if sensors can precisely map the space around us? What if we interact with systems by speech and gestures?</p> <p>If you want to look deeper, here are some projects from recent years</p> <ul style="list-style-type: none">– https://ausstellung.hfg-gmuend.de/w-2021/projekte/ada-prototyping-data-visualisations-without-coding– https://vimeo.com/442669100
Project description	<p>In this course we navigate from an understanding of technology to a meaningful product concept. Work sessions are mixed with short practical input, some sessions will be done as a podcast (to lower your screen-time). You start with understanding a cutting edge technology of your choice (e.g. machine learning, LIDAR, augmented reality). Next we form teams and we start matchmaking between technology and user experience. We start with a google-style design sprint. For a couple of weeks you will work on your project In the end, you make your concept tangible by creating a prototype</p>
Learning objectives	<p>How to use design skills for very open questions How to design in a real life situation, when you start with a technology How to find and communicate value as a designer</p>
Course assessment	<p>Final presentation Weekly progress in team work A short reflection of your learnings You can join this course, there is no special requirement</p>
Does the course have a more practical or theoretical focus?	<p>Practical focus</p>

Course descriptions: Interaction Design

Design Theory (2 ECTS) | Carmen Hartmann-Menzel

What is the content of the course?	After an overview about design history of the last round about 150 years we take a closer look on current debates in design theory including research about, for and through design. What are typical characteristics of design and what makes it special compared to humanities and sciences?
Project description	Lecture in combination with group discussions and exercises
Learnin objectives	Knowing current debates in design theory Knowing definitions of the design term Knowing about the different directions of design research
Course assessment	Participation in exercises during the course
Learning and results	Students know about the history and different ways of forming today´s understanding of design (especially in Germany), learn about planning theories and the objectives of design and design research.
Does the course have a more practical or theoretical focus?	Theoretical focus

Course descriptions: Interaction Design

Interface Design (8 ECTS) | Carmen Hartmann-Menzel

What is the content of the course?	With many products - in our private as well as professional surroundings - we interact multimodally. Whether we do our laundry, purchase a cool drink at a vending machine or prepare a coffee, we interact with machines on different levels of perception and action. User interfaces contain aspects of haptic interaction, exchange of visual and audible information and feedback as well.
Project description	Understanding of multimodality, development of design solutions in a certain context of use (design project). Topics are free to choose, haptics should be included. Tasks will include user research, user requirements engineering, development of human centred design solutions / prototypes and evaluation.
Learnin objectives	Methodology, design and communication skills Prototyping, physical computing Evaluation and iteration of design
Course assessment	Execution of design project, documentation and presentations
Learning and results	Students are able to analyse a specific context of use, to specify user requirements which they can prioritise and structure. They know the different phases and methods of human centred design. They can prototype, iterate and evaluate (e.g. using usability tests) their design solutions. They train presentation and communication of design approaches in their project teams..
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Interaction Design

Application Design I (6 ECTS) | Rebecca Götte Lectures in German, Slides and project meetings in English

What is the content of the course?	The students work on a redesign of a smartphone application. They understand the users and define their user needs. Analyze the context of your product and the competition. Restructure the information architecture. You will create optimized user flows, add user-relevant features and develop a coherent UI design. You run user testings regularly to validate and iterate your product hypothesis. A new mobile user experience arises.
Project description	Redesign an existing mobile app: You create a new mobile app experience with a concept-driven design approach and design multiple use cases. The focus is on: <ul style="list-style-type: none">– Understanding the user and its needs– Exploring the right solution and structuring functions and access of them– Materializing your concept in interaction, behavior, and design
Course assessment	<ul style="list-style-type: none">- Min. 3 use cases of your end product (.png)- Wireframe screenflow (.pdf)- Project documentation (.pdf)- Prototype concept video (.mp4)
Learning and results	Design Thinking Agile Product Development Mobile User Experience Design
Does the course have a more practical or theoretical focus?	Practical focus

Course descriptions: Internet of Things

Internet of Things (2 ECTS) | Wolfgang Schmidt-Sichermann

What is the content of the course?	<p>Fundamentals of Web Technologies with a focus on Hypertext Markup Language and Cascading Style Sheets teaches students:</p> <ul style="list-style-type: none">- Necessary elements and basic structure of HTML pages.- Creation of HTML pages and their formatting with CSS- Understanding of markup languages and tag technology- Understanding of file systems and relative paths- Knowledge of the most important HTML elements- Knowledge of the concept of stylesheets- Types of selectors and how to use them- Cascading the styles- Dynamic content- Client-sided interaction
Learning objectives	<p>The students understand basic web technologies and are able to exemplify them. They know the concepts of the web and its technical basics. The students have an insight into the basics of operating systems, concepts of client-server architecture and client-side programming of HTML pages and their markup/formatting with CSS. Students will be able to analyze and understand existing web pages. They will be able to design and create their own web pages and client-side formatting in the browser.</p>
Course assessment	<p>Exercises, project work, short project presentation</p>
Learning and results	<p>Lectures, exercise and projects Working with sublime (or other ASCII editor), various browser platforms (Chrome, Safari, Firefox, Edge), photoshop or other simple graphics programs.</p>
Does the course have a more practical or theoretical focus?	<p>Theoretical focus</p>