Syllabus
Course description

Course title	**Project Product Design 2a "ATELIERprojekte_WS21/22"**
Course code	97092
Scientific sector	Module 1: ICAR/13 Module 2: ICAR/13 Module 3: M-FIL/04
Degree	Bachelor in Design and Art (L-4)
Semester	Winter semester 2021/22
Year	2nd and 3rd
Credits	19 (Module 1: 8 CP, Module 2: 6 CP, Module 3: 5 CP)
Modular	Yes

Total lecturing hours	180 (Module 1: 90, Module 2: 60, Module 3: 30)
Total hours of self-study and/ or other individual educational activities	295 (Module 1: about 110, Module 2: about 90, Module 3: about 95)
Attendance	not compulsory but recommended
Prerequisites	To have passed the WUP project and all the WUP courses; to have certified the language level proficiency B1 in the 3rd language in years following the first.
Maximum number of students per class	

Course description	*The course belongs to the class "caratterizzante" (module 1), "di base" (module 2) and "affine integrativa" (module 3) in the curriculum in Design.* ***Modul 1 – Produktdesign/ Product Design*** DEUTSCH Ein junger Designer, der sich der Berufsrealität nähert, muss nicht darauf warten, dass ihm ein Unternehmen einen direkten Auftrag erteilt, sondern kann aus eigener Initiative neue Projekte vorschlagen. Er muss jedoch klare Vorstellungen haben und zunächst seine eigenen Interessensgebiete und den Beriech definieren, in dem er arbeiten sowie mit welchem Unternehmen er (fiktiv) zusammenarbeiten möchte. Er sollte eine besondere Sensibilität entwickeln, um die unterschiedlichen Philosophien/Kulturen der jeweiligen Unternehmen zu verstehen und "Lücken" innerhalb bestehender Kollektionen finden. ATELIERprojekte_WS21/22 zielt darauf ab, diese Fähigkeiten zu schärfen und den notwendigen Weg Schritt

für Schritt in Angriff zu nehmen:

- festlegen des eigenen Arbeitsgebietes nach sorgfältiger Recherche im vielfältigen Angebot von Objekten und Dienstleistungen;
- verstehen, wie ein Unternehmen eine Kollektion aufbaut, ob und mit welchen Designern es zusammenarbeitet und wie es sich auf dem Markt präsentiert;
- wahrnehmen der offenen Bereiche, die in den verschiedenen Kollektionen/Katalogen noch zu besetzen wären;
- definieren eines konkreten Produktes oder Dienstleistung;
- dieses durch Proportions-, Funktions- oder Anschauungsmodelle zu visualisieren;
- aufbereiten einer effektiven Präsentation, auch in schriftlicher Form.

Studierende haben in ATELIERprojekte die Aufgabe, ein eigenes Thema zu definieren und im Laufe des Semesters zu entwickeln. Die Ausgangspunkte können dabei die unterschiedlichsten sein: von der Erkundung urbaner Räume bis hin zur Neuinterpretation der eigenen persönlichen Umgebung. In jedem Fall werden die Studierenden ermutigt, die Realität, in der sie leben, mit einem kritischen Auge zu beobachten.

Diese sehr offene und freie Form des Projekts ist eine Übung im selbständigen Arbeiten, die besondere Aufmerksamkeit in der Organisation der eigenen Arbeit sowie ein gutes und verantwortungsvolles Management der eigenen Zeit erfordert.

ENGLISH

Generally a young designer who approaches the reality of the profession is not forced to wait for a company to give him a direct assignment but can, on his own initiative, come forward proposing new projects.

However, he must have clear ideas and first of all identify his fields of interest and the sector in which he wishes to enter and then which companies he would like to collaborate with. He needs to develop a particular sensitivity to understand the different philosophies of the companies he is considering and to perceive the "gaps" within the existing collections.

ATELIERprojekte_WS21/22aims to hone these skills and to tackle the necessary path step by step:

- to define one's own field of intervention after a careful;

- investigation into the world of objects and services that surround us;
- understand how a company builds a collection, if and with which designers it collaborates and how it presents itself on the market;
- perceive the "empty" spaces to fill in the collections/catalogues;
- think and define a concrete project or service;
- visualize it through models of proportion, function or mock-up;
- prepare an appropriate presentation, also in writing.

Each student will have the task of defining his or her own theme and developing it during the semester.
The points from which to start can be the most varied: from the exploration of urban spaces to the reinterpretation of one's own personal environment. In any case, students will be encouraged to take a critical look at the reality in which they live.

This very open and free form of project is an exercise in self-employment that requires particular attention to the organization of one's work and a good and responsible management of one's time.

Description Module 2 – Digital Modelling

ITALIANO
La progettazione 3D è un linguaggio universale che permette di mettere in relazione un progettista/designer con le aziende produttrici. Questo significa che un progettista/designer deve essere in grado di leggere, comprendere e scrivere le regole della progettazione 3D. La modellazione digitale non è solo programmazione; ma è un qualcosa di molto più amplio: è intrinseca alla progettazione stessa e fortemente legata ad ogni fase del processo creativo.
Tramite esercitazioni, casi studio, lezioni, workshop ed attività di modellazione manuale gli studenti impareranno ad analizzare le proprie idee in modo matematico. Con lo scopo di unire la propria creatività con le regole logiche e di modellazione 3D.

ENGLISH
3D design is a universal language that connects a designer with manufacturers. This means that a designer must be able to read, understand and write the rules of 3D design. Digital modeling is not just programming; it is something much broader: it is intrinsic to the design itself and strongly linked to every phase of the creative process.

	Through exercises, case studies, lectures, workshops and manual modeling activities, students will learn to analyze their ideas in a mathematical way. With the aim of combining their creativity with the logical rules of 3D modeling. ***Description Module 3 – Theories and languages of product design*** Since the atelier is adopting an open, non-restrictive attitude towards design themes, the theoretical part will be split into three competitive directions, facing part of the complexity of the design process: i) the offer of a theoretical background concerning the analytical study of industrial products in their relationships to the user, participating to their meaningful experience in term of perception, cognition, affection, identity; ii) the approach of the communicative layer enveloping the presence of objects in our mediatized world, starting with the design companies and their branding activities (collections & catalogues); iii) the introduction of ongoing trends in design, to effectively locate students contributions in an ever changing landscape. Case studies will be presented, both Italian and international, exploring the "language of industrial design": the series, the constitution of a collection, the promotion of a catalogue, the critical discourse about design, etc. The course will be mainly focalized on everyday objects, whose presence is long-lasting in the modern history.
Specific educational objectives	**Knowledge and understanding** **Module 1** have acquired their own project methodology in the field of product design. This methodology includes the ability to oversee all phases of design, from the generation of ideas to the realisation of the finished project. Through the integrated teaching of project subjects and subjects of a technical, scientific and theoretical nature, graduates will be able to simultaneously address all these aspects and consider them as synonymous with the development of a project that is successful on a formal, technical, scientific and cultural level.
	Module 2 The course aims to provide all the necessary skills to deal autonomously with a project in the field of product design, paying particular attention to the real feasibility of the idea. It will provide the necessary skills to learn the language of digital modelling and how it interacts with the

	creative process of a designer. In addition, the technical knowledge necessary to communicate with the language of digital modelling will be acquired. **Module 3** The main objectives of module 3 are: • the acquisition of a basic knowledge to analyse the interactive dimension of industrial products; • The development of the competence to critically locate the design approach and process in an historical frame; • The knowledge of the contemporary design trends, also concerning aesthetic issues; • know how to develop and present an assignment • to develop a good independent judgment, both in the critical evaluation of their work and in the ability to use the appropriate descriptive/analytical tools • to communicate at a professional level, both in written documents and speech

Lecturer	**Module 1 – Product Design** Kuno Prey e-mail kuno.prey@unibz.it, tel. +39 0471 015 110, 335 29 69 67 webpage https://www.unibz.it/en/faculties/design-art/academic-staff/person/900-kuno-prey **Module 2 – Digital Modelling** Francesco Sommacal e-mail francesco.sommacal@unibz.it, tel. +39 0471/015000, webpage https://www.unibz.it/en/faculties/design-art/academic-staff/person/43982-francesco-sommacal **Module 3 – Theories and languages of product design** Giacomo Festi e-mail giacomo.festi@unibz.it, tel. +39 0471/051000, webpage https://www.unibz.it/en/faculties/design-art/academic-staff/person/40076-giacomo-festi
Scientific sector of the lecturer	**Module 1**: Kuno Prey: ICAR/13 **Module 2**: Francesco Sommacal: ICAR/13 **Module 3**: Giacomo Festi: M-FIL/04
Teaching language	**Module 1**: German **Module 2**: Italian **Module 3**: English
Office hours	**Module 1**: Mo – Tu: 12:00 – 14:00 by appointment; **Module 2**: Mo – Tu: 13:00 – 14:00 in order to avoid overlapping the exact time of the appointment will be arranged by email;

	Module 3: Tu: 9:00 – 10:00. Other moments can be established by email with single students.
List of topics covered	**Module 1** Design of everyday objects for the home, office, person, travel, etc. Products to be produced in eco-sustainable materials that can be produced for the most part with production systems with low technological complexity. **Module 2** - how to move from an idea to the 3D modelling (sketches, form prototypes, digital creation) - digital modelling is an indispensable support of a creative process: *when, how and why*? - digital modelling vs. craft modelling - how methods to use and how to design in 3 dimensions (use of the Rhinoceros software) - polygon mesh surface, nurbs surface and subD surface - program learning, with all the basic functions for objects-modelling - laser cutting, plotting techniques and rapid design: CNC and 3D printing - how to communicate ideas in an analytic and mathematical manner, using technical tables. **Module 3** • What is a product, how to inquire its own meaningful dimension, which "tensions" can characterize it; • what is a design company in the domain and the history – and the contemporaneity – of industrial design; • What is a collection & a catalogue; • Case studies of companies: materials, products, catalogues, distribution, extra production activities; • Research papers on products and companies; • How to prepare and present projects and research at a professional level.
Teaching format	**Module 1** Project work in the atelier. **Module 2** Lectures, exercises, workshops, case studies. **Module 3** Frontal lectures, researches and discussions on issues related to the course, individual and group exercises, trips.

Expected learning outcomes	**Disciplinary competence** *Knowledge and understanding* **Module 1**

- have acquired the basic technical, scientific and theoretical knowledge necessary to realise a project in the field of product design.
- have acquired the basic knowledge necessary for the design profession.
- have acquired the basic knowledge necessary for further Master's studies in all components of project culture as well as in technical, scientific and theoretical subjects.

Module 2
- The students will acquire basic skills that will allow them to shape their ideas in a mathematical way, starting from sketches, bidimensional drawings and 3D material models.
- The students will acquire skills enabling them to face mathematical problems (with increasing difficulty), starting from the analysis and the understanding of real objects.
- The students will also acquire basic knowledge of the main 3D virtual construction methods, with the final aim to be able to create mid-complexity objects, in an independent way.
- The students will acquire basic skills that will enable them to communicate their ideas/projects in an analytical and mathematical, with the support of technical drawings.
- The students will acquire basic knowledge of file management processes for laser cutting, CNC and 3D printing.

Module 3
- Understand what a language is and in which sense a product can be read as a linguistic unit
- Understand what is a theoretical problematization within a project
- Understand what trends are and how to take profit of them within a project

Applying knowledge and understanding

Module 2
- use the basic knowledge acquired in the technical, scientific and theoretical fields to realise a mature project to recognise the main phenomena of contemporary.
- make use of the skills acquired during the course of study in the event of continuing studies in a Master's degree programme in the field of design and to develop them further.

- to use the basic knowledge acquired during the course of digital modeling to deal with projects in full autonomy from the logical / mathematical point of view
- be able to distinguish and recognize the degree of complexity referred to the 3D project
- to use in a conscious and critical way the digital modeling tools
- to use the skills acquired to create 2D technical tables in order to conceive their models in a professional manner
- to use the skills acquired to create 3D digital models in order to create printed and/or milled models

Module 3
- applying semiotic concepts to the analysis/deconstruction of existing objects
- applying semiotic concepts to the interpretation of practical tensions, relevant to determine the position of the object to design

Transversal competence and soft skills
Making judgements

Module 1
- Be able to make independent judgements for the purpose of developing their own design skills and in relation to all those decisions (technical, scientific and theoretical) that are necessary to bring a project to completion.

Module 2
- be able to understand and analyze their own ideas in a mathematical and logical way
- be able to understand when and why digital modeling becomes a tool to support and simplify design within their creative process.

Communication skills

Module 1
- present an independently realised project in the field of product design in the form of an product or an service (model), orally as well as in writing in a professional manner.

Module 2
- be able to communicate projects/objects in a clear and professional manner, with the use of 2D technical tables and 3D mathematical models

	- be able to make use of digital modelling as support for rapid design and models - be able to communicate projects/objects in a photo-realistic way. **Module 3** - Improving presentational skills and argumentative ones *Learning skills* **Module 1** - have learned a design methodology at a professional level - in the sense of being able to identify, develop and realise solutions to complex design problems by applying the acquired knowledge in the technical, scientific and theoretical fields - in order to start a professional activity and/or continue their studies with a master's degree programme. - have developed a creative attitude and learned how to enhance it and develop it according to their own inclinations. - have acquired basic knowledge in theoretical, technical and scientific subjects as well as a study methodology suitable for continuing studies with a Master's degree programme. **Module 2** - Acquire and improve your skills described in the "List of topics covered". **Module 3** - Learning to confront with the existing scientific literature in the topics implied within the design process

Assessment	**Module 1** Product Design presentation of the project: each candidate will present his work through graphic drawings, a model, photographs, a synthetic text and a concentrate of his work in a sixteenth. The design path, the final result and all the materials delivered will be evaluated. The presentation of the project will be public. Materials to be delivered: three days before the examination date the following documents must be delivered to the project assistant: 1. construction drawings; 2. model of proportions or functional model (possibly in 1:

1 scale);
3. Max. 3 photos that highlight the characteristics of the final elaborate format 10cm x 15cm, 72 dpi, RGB, jpg and 300 dpi, CMYK, tif;
4. short summary text where the final paper is presented (max 500 characters, doc or rtf);
5. the data need to be concentrated in a sixteenth in the A5 format of the design path and with the final result. The facsimile of the sixteenth will be delivered and explained to the students one month before the end of the project.

NB: The timely delivery of all the materials being examined is essential for admission to the exam itself.

Module 2
Digital modelling
The final assessment will be the result of work conducted during the whole semester. In particular the following will be evaluated:
• The ability to self-express through technical presentations
(2D Tables – 3D models);
• The motivation and the commitment shown during the module and in the atelier;
• The spirit of observation and the curiosity displayed during the semester.
• the ability to develop functional ideas.

Materials to be delivered: three days before the examination date the following documents must be delivered
- technical tables (2D-construction drawings) of your project.

Module 3
Theories and languages of industrial design
Students will be asked to read, understand and study selected essays relevant for the theoretical part of the atelier. That materials will be used to accomplish the home assignments during the module, concerning both the semiotic analysis of the product and the critical profiling of design companies.

For the final exam, the students will be asked to prepare a sixteenth in the A5 size: a "journal" project dedicated to the ATELIERprojekte_WS20/21 path, with a detailed description (with both texts and visual material) of the development of the final, personal project. The contents are requested according to a set of columns/chapters, to

	be filled with the material elaborated and collected during the semester project development.
Assessment language	The same as the teaching language
Evaluation criteria and criteria for awarding marks	*By exam's date, each student must upload on the Microsite of the faculty detailed documentation of the work done during the course.* *http://portfolio.dsgn.unibz.it/wp-admin* *Documentation is an integral part of the exam. The documentation must include visual documentation and an abstract of the project.* The final assessment is based on the content of all the exercises according to the following criteria: **Module 1** Product Design The quality and clarity of the research, the creativity and the originality of the design concept, the quality and clarity of the design process, of the development and realization of the project such as the professionalism and consistency of the presentation and documentation. Also contributing to the final evaluation will be the initiative and the personal commitment in the atelier, in the research and the study and the participation in the project or the continuity, the attention and the curiosity demonstrated. **Module 2** Digital modelling - (25/100) participation, punctuality, spirit of observation and reasoning skills to solve technical problems - (25/100) ability to self-express through technical presentations (2D tables – 3D models) - (25/100) 2D-construction drawings of the project idea - (25/100) quality of the end of semester project in relation to the digital modelling module. **Module 3** Theories and languages of industrial design - (20/100) quality of the study of the assigned materials, through tests - (40/100) quality of the individual research related to the chosen design field - (40/100) quality of the final 16th

Required readings	**Module 1**: -

	Module 2: - **Module 3**: The suggested selection of readings will be communicated during the course at the students, on individual basis, depending on their specific interests and researches.
Supplementary readings	**Module 1**: - **Module 2**: - **Module 3**: References about the main topics of the course. A. About good and bad design: - Donald Norman, *The Psychology of Everyday Things*, Basic Books, 1988. - Bruno Latour, "A Cautious Prometheus? A Few Steps Toward a Philosophy of Design: (With Special Attention to Peter Sloterdijk)", 2009 http://www.bruno-latour.fr/node/69. B. About the semiotics of artifacts: - Alvise Mattozzi, ed., *Il senso degli oggetti tecnici*, Roma, Meltemi, 2006. - Alessandro Zinna, *Le interfacce degli oggetti di scrittura*, Roma, Meltemi, 2002. - Jacques Fontanille, "Sémiotique des objets", *Versus*, 91/92, 2002. - Michela Deni, *Oggetti in azione*. Semiotica degli oggetti: dalla teoria all'analisi, Milano, Angeli, 2002. C. References in history of design & tendencies in design: - Michela Nacci, ed., *Oggetti d'uso quotidiano. Rivoluzioni tecnologiche nella vita d'oggi*, Venezia, Marsilio, 1998. - Renato De Fusco, *Storia del design*, Laterza, Milano 2019 (or previous editions from 1985) - Enrico Morteo, *Grande Atlante del Design dal 1950 a oggi*, Rizzoli, Milano 2019 (or the previous edition) - Gillo Dorfles, *Introduzione al disegno industriale*, Einaudi, Torino 2001 - John Heskett, *Industrial Design*, Thames and Hudson, London 1995 - Chiara Alessi, *Dopo gli anni Zero. Il nuovo design italiano*, Bari, Laterza, 2014. - [magazine] *Inventario*, Corraini Edizioni, Mantova from 2010 (14 issues until now).

	- Beppe Finessi (ed), *Il design italiano oltre la crisi*, Corraini Edizioni, Mantova 2014.