

Syllabus

Course Description

Course Title	Design & Production
Course Code	96105
Course Title Additional	
Scientific-Disciplinary Sector	CEAR-08/D
Language	English
Degree Course	Master in Eco-Social Design
Other Degree Courses (Loaned)	LM-65 Critical Creative Practices - 2025
Lecturers	Prof. Aart van Bezooijen, Aart.vanBezooijen@unibz.it https://www.unibz.it/en/faculties/design-art/academic-staff/person/38596
Teaching Assistant	
Semester	Second semester
Course Year/s	1st and 2nd year
CP	6
Teaching Hours	60
Lab Hours	0
Individual Study Hours	0
Planned Office Hours	18
Contents Summary	<p>Based on their interests and focus, students select courses in areas Observe, Analyse & Apply and of Make & Intervene, to which the course in Design & Production.</p> <p>The course supports the development of practical skills and hands-on experiences, aiming to build up a base of knowledge and understanding concerning production processes from self-built tools to industrial production systems in the context of design. In parallel, the course encourages the development of a critical attitude towards traditional and emerging production techniques within circular and bio-based economies. This course explores how to choose and adapt fabrication processes based on materials and</p>

	<p>production techniques. Students document and analyze a range of manufacturing methods, ranging from industrial solutions to DIY and in-house workshop techniques. By clustering, comparing, and reviewing selected processes, the course encourages critical reflection on traditional and alternative production methods, aiming to support more sustainable and eco-social approaches in making.</p>
Course Topics	<p>The course will support the development of practical skills and hands-on experiences, aiming to build up a base of knowledge and understanding concerning production processes from self-built tools to industrial production systems in the context of design. In parallel, the course encourages the development of a critical attitude towards traditional and emerging production techniques within circular and bio-based economies.</p> <p>The choice of an appropriate fabrication process is one of the most important decisions in the process of making physical things. What material is being used, what quantity of parts is to be produced and what sort of geometry do they have? Processes are selected depending on our needs. If a process is not available for serial production, we might even need to create it ourselves.</p> <p>Together we will be documenting the landscape of selected manufacturing processes available as industrial solutions, in-house faculty workshops, and do-it-yourself solutions. Through a systematic overview by clustering, comparing, and reviewing selected production methods we will consider how to adapt traditional processes and explore alternative ways of creation within a more eco-social future.</p> <p>We will explore, analyze and prototype more accessible, distributed and democratic ways of manufacturing. Every semester includes a special focus on one or more development and processing techniques. Your so called "machine project(s)" should empower a do-it-yourself approach to local manufacturing using materials which are currently discarded or unconsidered.</p> <p>The course will be in close collaboration with the faculty workshops and the BITZ unibz fablab. With excursions, factory visits and guest lectures we will get a closer look at the known and lesser-known realities of how things are made. The course program is adaptive and encourages any form of collaboration, relations and</p>

	synergies with other fields and courses.
Keywords	Mass production, personalized production, peer production, distributed manufacturing, product service systems, bio fabrication, digital fabrication, do-it-yourself processes, open-source documentation, product life cycle, circular design, material research, environmental and social impacts, urban mining, traditional crafts, sustainable futures.
Recommended Prerequisites	none
Propaedeutic Courses	none
Teaching Format	<p>Research presentations: After the project introduction, we will research and discuss selected manufacturing processes. Individual research results are gathered and shared with each other.</p> <p>Design for (dis)assembly: Through disassembling existing products and assembling new applications we will make the first experiences with the process of making and unmaking. Experimental setups should allow design improvisation and understanding of how things are made on an industrial scale.</p> <p>Guest lectures: Guest speakers will give us a better insight in the business practices of production. For example, through interviews with a design studios/labels producing in small series and factory visits at industrial manufacturing companies.</p> <p>Skill sharing: This course allows us to learn from lecturers, guests and each other. We put high value on the dialogue between the participants and will support this process of skill sharing. The content and format of the courses will be fine-tuned according to the dialogues, collaborations and dynamics of you as a group.</p> <p>Learning by doing: The approach of this semester project comes with an "Learning by Doing" approach involving theme-based hands-on workshops with guest lecturers and doing practical exercises at the university workshops.</p> <p>Designer maker: Unlike developing a single final product - this course focuses more on getting to know different ways of making. We provide you with inspiring talks, hands-on exercises, group discussions and creative methods for problem solving and solution finding for current and future design projects.</p>

Mandatory Attendance	Highly recommended.
Specific Educational Objectives and Learning Outcomes	<p>Knowledge and understanding</p> <p>Students will have developed their own individual project practice and will be able to:</p> <ul style="list-style-type: none"> - Develop creative solutions and processes - making complex problems tangible through design, visualization and storytelling - developing prototypes or delegating their development <p>Applying knowledge and understanding</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> - make tangible ideas, reports and projects, such as sketches, visualizations, mock-ups, models, prototypes, interventions and prototype events <p>Making judgements</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> - assess the sustainability of projects - judging independently and critically practical procedures, technical procedures, materials, construction methods and technologies and their impact on the environment, individual or group <p>Communication skills</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> - communicate convincingly in different ways and with different audiences - present projects convincingly <p>Learning skills</p> <p>Students will be able to:</p> <ul style="list-style-type: none"> - working independently to learn according to different situations and in a personal way through the development of prototypes, models, mock-ups and the feedback they provide
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	<p>Oral:</p> <ul style="list-style-type: none"> - Physical presentation of the students' complete design process,

	<p>artifacts and material samples produced in the different phases and parts and especially the final project.</p> <ul style="list-style-type: none"> - Holding a knowledgeable and critical discourse concerning both the final developed project and more generally towards the world of materials in design and the related product logic and sustainability aspects as discussed in the course. - The presentation takes place as a separately from the semester project. - Students must deliver a complete documentation of the semester work. <p>Assessment of non-attending students: Non-attending students have the same assessment criteria as attending students. All requested assignments need to be done, and all deliverables (both intermediary and final) need to be provided in time. The knowledge shared in the theoretical and practical lectures need to be acquired. Hence, the exam of non-attending students might last longer to test that specific knowledge has been acquired and applied to the presented project.</p>
Evaluation Criteria	<p>Level of the acquired knowledge concerning materials, manufacturing and design in all aspects and perspectives as discussed in the course.</p> <p>Originality and coherence of the design project in relation to the use of materials and aspects of the production process.</p> <p>Effectiveness in communicating the project.</p> <p>Attitude, participation and active contribution to the course.</p>
Required Readings	<p>“Making it: Manufacturing techniques for product design” by Chris Lefteri</p> <p>“Materiology : the creative's guide to materials and technologies” by MatériO</p> <p>“Werkzeuge für die Designrevolution“ by the Institute of Design Research Vienna</p> <p>“Social Label Works: An open book about designing work” by Petra Janssen and Simone Kramer</p>
Supplementary Readings	
Further Information	
Sustainable Development	Industry, innovation and infrastructure, Responsible consumption

Goals (SDGs)	and production, Sustainable cities and communities
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