# Syllabus
# Course description

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| **Course title** | Design & Production |
| **Course code** | 47205 |
| **Scientific sector** | CEAR-08/D (ex ICAR/13) |
| **Degree** | Master in Critical Creative Practices (LM-65) |
| **Semester** | Summer Semester 2025/26 |
| **Year** | 1 |
| **Credits** | 6 |
| **Modular** | no |

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| **Total lecturing hours** | 60 |
| **Total hours of self-study and/ or other individual educational activities** | 90 |
| **Attendance** | highly recommended |
| **Prerequisites** | / |

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| **Specific educational objectives** | The course refers to a “caratterizzante” educational activity and is a mandatory course in the first study year.<br><br>**Course description**<br>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.<br><br>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, which will be the hands-on part of this course.<br><br>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. We’ll be guiding and (self) evaluating our |

work with the help of the Circular Design Rules (by the Institute of Design Research Vienna).

Students will be asked to focus their projects on the processing of circular and/or bio-based materials. We will explore, analyze and prototype more accessible, distributed, and democratic ways of manufacturing, such as the Precious Plastic Project. These so called “machine projects” demonstrate a do-it-yourself approach to local manufacturing using materials which are currently discarded or unconsidered. In short, designing out waste with the help of alternative crafts, tools, and processes.

This semester will put a special focus on the design and development of making & unmaking (temporary) structures made of various materials such as wood, metal, plastics, textiles – including a special focus on joints (e.g. XYZ nodes / spaceframes) and joining techniques. Foreseen teamwork is meant to collaboratively explore the applications of self-built structures within the context of own university, public space, personal mobility, exhibition displays and more.

The course will be in close collaboration with the faculty workshops and the BITZ unibz fablab. We are encouraging any form of collaboration, relations and synergies with other fields and courses as well as the yearly theme: *Staying with the trouble (Haraway, 2016).* The course program is adaptive and foresees a possible support in the processing/implementation aspects of the student’s main project.

**Course Structure:**

- **Research presentations**: After the project introduction, we will research and discuss selected manufacturing processes. Individual research results are gathered and shared with each other being the first (explorative) step towards the machine project.

- **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.

- **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.

- **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.

- **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.

- **Designer maker:** Unlike developing a final product the course focuses 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.

- **Project documentation:** The course process and exercises should be documented along the course. The personal documentation format will be discussed at the start of the course. This documentation is the main deliverable of the course and will be developed step-by-step along the course (not in the end).

- **Material library:** Besides the process documentation - results will include selected joining materials and techniques to be documented in the university’s material collection. A template will be provided during the course. Documenting and sharing this information will be useful at later stages in your (and others) studies.

**Educational objectives**

The class promotes critical and analytical thinking, allowing students to evaluate and interpret artistic and design practices in the context of the current sociocultural and technological dynamics. New possibilities for innovation in artistic and design production and, more

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| | importantly, the opportunities for synergy between contemporary culture and technological progress, fostering a mutual exchange of ideas and advancements will be explored. Advanced research skills will be developed to explore emerging frontiers in the field of art and design and new opportunities for technological innovation in the creative sector.<br><br>**Students will be able to:**<br>- Know how to make decisions related to production systems and processes and how to develop new ones with an eco-social mindset.<br>- Make critical reflections on their own design projects by analyzing the environmental, social, sustainable and economic impacts.<br>- Develop a personal way of thinking, leading to critical judgements and self-assessments.<br>- Communicate in a convincing way, through a variety of modalities (three-dimensional, written, oral, visual).<br>- Balance inspiration and systematic planning. Balance more intuitive ways of working with more analytical ones.<br>- Find and talk with experts about the project.<br>- Develop a shareable do-it-yourself manual.<br>- Read experts' articles, studies and reports related to one's own project issues and integrate those analyses with one's own project design.<br>- Take into account the sustainability requirements of the objects; integrate the sustainability requirements in the project and in one's own design.<br>- Use relevant software and hardware tools and systems productively.<br>- Prototype of self-developed processes or self-built machines.<br>- Design and make materials and objects.<br>- Share skills with fellow participants.<br><br>**Knowledge will be acquired in the following fields:**<br>● Systems, techniques, processes and materials of production, with particular attention to the impacts on the environment and on the society due by the production, distribution and the complete life cycle of an object.<br>● Experiment with materials and processes, both traditional and digital, in order to gain a thorough understanding of the process and the object (learning by doing).<br>● Document the complete process in a professional and continuous way. |

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| **Lecturer** | Aart van Bezooijen<br>Office: C4.03<br>Email: Aart.vanBezooijen@unibz.it<br>Webpage: https://www.unibz.it/en/faculties/design-art/academic-staff/person/38596-aart-van-bezooijen |
| **Scientific sector of the lecturer** | CEAR-08/D |
| **Teaching language** | English |
| **Office hours** | TBA |
| **List of topics covered** | - Mass and personalized production<br>- Peer production<br>- Distributed manufacturing<br>- Product service systems<br>- Bio fabrication<br>- Digital fabrication<br>- Do-it-yourself processes |
| **Teaching format** | Input lectures, workshop sessions, brainstorming sessions, mentoring sessions, practical hands-on exercises, material demonstrations, excursions and interviews, group presentations and reviews. |

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| **Learning outcomes** | *The learning outcomes need to refer to the Dublin Descriptors:*<br><br>*Knowledge and understanding*<br><br>Students of the course will:<br><br>- know the meaning of Design and Production within the main techniques and methodologies spatial practices in art and design;<br><br>- possess specific knowledge about Design and Production and its influence on the interactions between space and culture and on the sociopolitical implications of spatial practices;<br><br>- understand the relevance of Design and Production in the processes of transformation of space in the contemporary context, analyzing them considering the connections with other fields of knowledge, such as sociology, anthropology and urban sciences.<br><br>*Applying knowledge and understanding*<br><br>Students of the course will acquire the capability to apply knowledge in the field of Design and Production in order to:<br><br>- design and implement spatial interventions, exhibitions, artistic installations and design projects that explore and reinterpret public and private spaces.<br><br>- use reading, analysis, mapping and visualization tools to analyze and communicate complex ideas relating to space.<br><br>- create spatial interventions that respond to the needs of communities, promoting inclusiveness and social participation<br><br>*Making judgments*<br><br>Students of the course will acquire the capability to make judgments in the field of Design and Production in order to:<br><br>- apply the knowledge acquired in the professional context.<br><br>- devise original projects that take into account the |

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| | transformations induced by globalization and internationalization processes.<br><br>*Communication skills*<br><br>Students of the course will acquire communication skills in the field of Design and Production in order to:<br><br>- use visual and multimedia tools to create engaging and informative presentations.<br><br>*Learning skills*<br><br>The course of Design and Production is aimed at:<br><br>- the strengthening of the critical and operational autonomy of students.<br><br>- the development of their ability to choose, compare and adapt to new knowledge and technologies. |

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| **Assessment** | Oral:<br>● Physical presentation of the students' complete design process, artefacts and material samples produced in the different phases and parts and especially the final project.<br>● 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.<br>● Students have to deliver a complete documentation of the semester work. The format of the documentation will be defined and communicated semesters' end at the latest.<br><br>**Non-attending student assessment**<br>Non-attending students have the same assessment criteria as Attending students.<br>- All assignments and projects need to be done, and the required knowledge has to be acquired.<br>- The exam of non-attending students may take longer (max. 20 minutes) in order to test specific knowledge in relation to manufacturing and material aspects of the presented project, and beyond. |
| **Assessment language** | English |
| **Evaluation criteria and criteria for awarding marks** | • Level of the acquired knowledge concerning material & Design in all aspects and perspectives as discussed in the |

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| | course.<br>• Originality, coherence and aesthetic qualities of the design project, in relation to the context and the aims of the project; in particular, related to the use of materials and aspects of the production process.<br>● The ability of using the skills and knowledge learned through lectures and exercises<br>● Effectiveness in communicating the project.<br>● Attitude, participation and active contribution to the course. |

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| **Required readings** | ● "Making it: Manufacturing techniques for product design" by Chris Lefteri<br>● "Materiology : the creative's guide to materials and technologies" by MatériO<br>● "Circular Design Rules – Version 1.0 for Product Design" by the Institute of Design Research Vienna<br>● "Werkzeuge für die Designrevolution" by the Institute of Design Research Vienna<br>● "Design und Improvisation. Produkte, Prozesse und Methoden" by Annika Frye<br>● "Social Label Works: An open book about designing work" by Petra Janssen and Simone Kramer |
| **Supplementary readings** | Further readings and articles will be given during the course. |