

SYLLABUS

course description

The course belongs to the class “caratterizzante” (alternativa) in the MA in Eco-Social Design (LM-12). This course is a compulsory optional subject in the area “Skills & Technologies”

Course title	Design & Materials Area: Skills & Technologies
Course code	96007
Scientific sector	ICAR/13 – Disegno industriale
Degree	Master in Eco-Social Design (LM-12)
Semester	I
Year	1st and 2nd
Credits	6
Modular	No
Lecturer	Andrea de Chirico office F4.02, e-mail andrea.dechirico@unibz.it , tel. +39 0471 015321, Webpage http://www.unibz.it/en/design-art/people/StaffDetails.html?personid=36631&hstf=36631
Scientific sector of the lecturer	-
Teaching language	English
Teaching assistant (if any)	-
Office hours	-
Teaching language	English
Total lecturing hours	60
Total hours of self-study and/or other individual educational activities	about 90

Attendance	highly recommended
Prerequisites	-
Course page	

Course description

The course will give the practical skills and knowledge to build up a critical attitude towards making an object in the time we are living in. It means to be aware of the ethical responsibility that comes with the profession. In addition, it will give an understanding about decision making in terms of materials for specific use and context and their environmental and social impact.

Moreover, product life cycles will be analyzed in order to define if a product is sustainable or not. In these terms, the course will give the tools to analyze the production processes connected to an object, being able to redesign it into a more sustainable way. It will focus on experimenting with materials and processes, being able to document and communicate them in a structured way.

The course will start with hands-on exercises in order to experiment with materials and processes, both traditional and digital ones. They'll be documented along the way and will lead to a final object. This part represents the 50% of the course. The other 50% of the course is dedicated about highlighting positive impact existing practices in the field of Design & Materials. The students are encouraged to gather knowledge in order to then define their own position in the field. This teaching is also meant to give practical knowledge to help the students in the development of their semester project, according to its topic "commoning?!" ("learning by doing").

Educational objectives

Students will be able to:

- collaborate with experts and other designers to develop and implement an integrated project;
- prototype;
- take into account the environmental, social, sustainable and economic impacts occurring within the tension between global and local dimensions;
- develop a personal way of thinking, leading to critical judgements and self-assessments;
- balance inspiration and systematic planning;
- balance more intuitive ways of working with more analytical ones;
- communicate, multilingually in a convincing way, through a variety of modalities (tridimensional, written, oral, visual);
- talk to experts about the project;
- read experts' articles, studies and reports related to one's own project issues and integrate those analyses with one's own project design;

- take into account the sustainability requirements of an object, a service, an application or an interactive system; integrate the sustainability requirements in the project and in one's own design;
- use relevant software and hardware tools and systems productively;
- design and make an object (also editorial products);

Knowledge will be acquired in the following fields:

- 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;
- Experiment with materials and techniques, both traditional and digital, in order to deeply understand the process and the object (learning by doing).
- Document the process of the constant loop: experimenting, trying and failing.

List of topics covered

Products life cycle, material use, material research, environmental and social impacts, traditional crafts, digital crafts, future designer, system design, networked production, distributed manufacturing, peer2peer production.

Teaching format

Frontal lectures, workshop sessions, mentoring sessions, hands-on exercises, presentations and reviews.

Learning outcomes

Knowledge and understanding

Students will acquire knowledge of materials in product design projects. More importantly, they will see them into a more system based context, enlighten the social and environmental aspects of what they make.

Applying knowledge and understanding

Students will be able to apply acquired knowledge in the development of their own projects.

Making judgments

Students will acquire the ability to critically choose the most appropriate materials and techniques to meet the goal of their projects. Keeping a hands-on approach they will be asked also to review other projects.

Communication skills

Students will be able to communicate their designs bringing on point arguments. They will be asked to use specific terminology. They'll be tested in order to understand whether to stand for their projects or renegotiate them.

Learning skills

Students will learn how to approach questions related to materials and production processes. They will know how to be in charge of their own design decisions, mostly production related ones. They will learn how to build up the production network needed to achieve their design goals, involving experts, craftsmen and other designers.

Assessment

Oral:

- Physical presentation of the students' design process and object.
- Critical discussion of the project, in particular related to the choices of materials and aspects of the production (from where it comes from, why is it like it is, and future developments)
- The students are asked to constantly question their design choices and put their project in a loop of trying and adjusting.
- The presentation takes place as a separate one from the semester project.
- Students have to deliver a documentation. The format of the documentation will be defined and communicated two weeks before the end of the semester at latest.

Non-attending students assessment

Non-attending students have to make an object independently, showing to be able to manage decisions in both analogue and digital manufacturing techniques and materials. The object can be either following the current semester project (commoning?!) or be integrated in the thesis research development. The object has to be presented in a coherent way, together with a documentation of it. The format of the documentation has to be discussed with the teacher according to the project. Being non-attending students, the format of the exam will be happening in an oral presentation but it will 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

- 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.
- Effectiveness in communicating the project.
- Attitude, participation and active contribution to the course.
- Ability to work in a team, always being aware of the power of collaboration and networked labour.

Required readings

Making Commons, Anna Serravalli, Malmö university.

The Craftman, Richard Sennet

Autoprogettazione, Enzo Mari

Futuro Artigiano, Stefano Micelli, Marsilio editore.

Thackara, John: In the Bubble. Designing in a Complex World, Cambridge, MIT Press, 2005.

William McDonough, Michael Braungart, Cradle to Cradle, Vintage Editions, 2009.

Explore the Brave new world of design and manufacturing, space10, 2017.
(<http://space10umbraco.rwatgg.com/media/12847/imagine-by-space10.pdf>)

Supplementary readings

Will be given during the course.