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 https://next.unibz.it/en/faculties/design-art/academic-staff/person/36631-andrea-de-chirico
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	**not compulsory but very recommended**

Prerequisites	-
Course page	**http://pro2.unibz.it/projects/blogs/essen/**

Course description
The course will give the practical and critical skills to become a future product designer. 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 whether 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. Finally, being able to communicate the project in a structured way and being self-critical is another skill that will be provided.
The 50% of the course consists of a structured introduction into Design & Materials (including practical exercises). The other 50% teach Design & Materials in the context of the individual projects of student teams (for the 1st year students related to the annual topic "food"). This teaching helps to develop and prototype the diverse student projects, integrating the competences about Design & Materials ("Learning by doing").

Educational objectives
Students will be able to:
- collaborate with experts and other designers to develop and implement an integrated project;
- prototype and partially implement projects;
- propose and develop projects which will contribute to local development while considering the global context, starting from a "glocal" vision, which "focuses on the global and planetary dimension and the local one at the same time" (from the Dizionario Treccani);
- take into account the environmental, social and economic impacts occurring within the tension between global and local dimensions;
- integrate socio-economic aspects and sustainability requirements in project design while considering the tension, which occurs between the local and the global dimensions;
- develop an individual 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;
- balance both emotions and functions in design and communication;
- communicate, multilingually in a convincing way, through a variety of modalities (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 a product, a service, an application or an interactive system; integrate the sustainability requirements in the project and in one's own design;

- organize a research project while identifying relevant studies and researches, experts to collaborate with, methods and instruments to adopt;
- integrate knowledge techniques and production systems, the knowledge of materials, of their processing and of the related sustainability requirements in the design process;
- use relevant software and hardware tools and systems productively;
- fabricate small series of products (also editorial products);
- understand specialist literature so as to integrate it within their own research project;

Knowledge will be acquired in the following fields:
- systems, techniques, processes and materials of production, with particular attention to the impacts on environment and on society caused by the production, distribution and the complete life cycle of a product;

List of topics covered
Products life cycle, material use, 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, presentations and reviews and exercises.

Learning outcomes

Knowledge and understanding
Students will acquire knowledge of materials in product design projects. More importantly, they will see their projects into a more system based context, enlighten the social and environmental sustainability of what they produce.

Applying knowledge and understanding
Students will be able to apply acquired knowledge in the development of their own projects in product design.

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 and they will be tested in order to make them 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:
- Oral, audiovisual and/or physical presentation of the students' design project
- Critical discussion of the project, in particular related to the choice of materials and aspects of the production.
- Students have to present a practical design project. This should be part of the semester project (developed in "Projects 1 – Design 1" or in "Projects 3 – Design 3"). If this is not possible, students can also present a smaller project, which was elaborated within the course only.
- The presentation takes place within the exam of the semester project. Only if students are not able to integrate the discipline of the course within their projects, they have to present a small project developed specifically for the course in a separate exam.
  - 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.

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 on both the oral presentation and the digital one.
• Ability to work in a team, always being aware of the power of collaboration and networked labour.

Required readings
The wealth of networks, how social production transforms market and freedom. Yochai Benkler,2006.
Making Commons, Anna Serravalli, Malmo university.
The Craftman, Richard Sennet
Autoprogettazione, Enzo Mari
The Flock Society, p2p foundation, Michel Bauwens. The future of capitalism, Jogi Panghaal.
Futuro Artigiano, Stefano Micelli, Marsilio editore.
Thackara, John: In the Bubble. Designing in a Complex World, Cambridge, MIT Press, 2005.
Nardi, B. The Role of Human Computation in Sustainability, In *Handbook of Human Computation*, New York, Springer, 2013.

Rifkin, Jeremy. The Zero Marginal Cost Society: The Internet of Things, the Collaborative Commons, and the Eclipse of Capitalism, New York, 2015.
Haque, Umair. The New Capitalist Manifesto: Building a Disruptively Better Business, Harvard Business Review Press, 2011.
William McDonough, Michael Braungart, Cradle to Cradle, Vintage Editions, 2009.

Supplementary readings
Other readings will be suggested during the course.