

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 & Production Area: Skills & Technologies
Course code	96004
Scientific sector	ICAR/13 – Design e comunicazioni multimediali
Degree	Master in Eco-Social Design (LM-12)
Semester	II
Year	1st and 2nd
Credits	6
Modular	No
Lecturer	Secil Ugur Yavuz Secil.uguryavuz@unibz.it https://www.unibz.it/en/faculties/design-art/academic-staff/person/36117-secil-ugur-yavuz
Scientific sector of the lecturer	ICAR/13
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	recommended
Prerequisites	-
Course page	https://www.unibz.it/en/faculties/design-art/master-eco-social-design

Course description

The course will give practical and critical skills and knowledge on traditional and emerging production systems work with a special focus on eco-social design. Besides the traditional production techniques and process, it will introduce alternative ways of producing goods, using resources, designing a holistic system and creating a complete life cycle of a product.

The course will address production techniques from different angles and scales introducing diverse methods and processes such as mass production, craftsmanship, digital fabrication, peer2peer production, etc. through lectures and hands-on exercises (learning by doing). It will concentrate on not only designing the product itself, but also creating a whole system which is ecologically and socially balanced and well-designed. The course will address critical questions related to the role of today's designer in designing processes and systems of production with an eco-social awareness.

The students will be asked to document the process of each assigned exercise. At the end of the course, a final discussion session will be done based on a presentation that represents the results of the exercises and reflects a synthesis of the skills learned through the course.

This course is also meant to give practical knowledge and skills to apply them in the main semester project and contribute to the annual theme. Approximately 50% of the teaching is related to the projects of the students. Where this does not fit other practice-oriented work is done.

Educational objectives

Students will be able to:

- know how to make decisions related to production systems and processes and how to develop new ones with an eco-social awareness;
- communicate the material and production decisions made during the design project, in a convincing way, through a variety of modalities (tridimensional, written, oral, visual);
- collaborate with experts and other designers to develop and implement a project;
- know how to turn an idea into a tangible prototype in "the real world".
- make critical reflections on their own design projects by analyzing the environmental, social, sustainable and economic impacts.
- make effective research through reading experts' articles, case-studies and reports related to one's own project issues and integrate those analyses with one's own project design;
- consider 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;
- use relevant software and hardware tools and systems productively;
- balance inspiration and systematic planning;
- balance more intuitive ways of working with more analytical ones.

Knowledge will be acquired in the following fields:

- systems, techniques, processes and materials of production, with a particular attention to the impacts on environment and society caused by the production, distribution and the complete life cycle of a product;

List of topics covered

Traditional crafts, mass production, digital fabrication, digital crafts, product-service-system design, distributed manufacturing, peer2peer production.

Teaching format

Frontal lectures, workshop sessions, mentoring sessions, presentations and exercises.

Learning outcomes

Knowledge and understanding

Students will acquire knowledge of materials and processes of production in design projects. They will be able to understand the social and environmental impacts of what they produce through applying a system-based approach.

Applying knowledge and understanding

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

Making judgements

Students will acquire the ability to critically analyze and choose the most appropriate materials, techniques and processes to meet the goal of their projects.

Communication skills

Students will be able to communicate their design projects by using specific terminology and representation methods, both physical and digital.

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 create a system of production to achieve their design goals, involving various stakeholders.

Learning by doing

Besides frontal lectures, students will learn knowledge and skills through hands-on exercises in which they experience how to deal with materials and various production techniques and processes.

Assessment

Oral:

- Physical and oral presentation of the assigned exercises.
- Critical discussion of the semester project, in particular related to the choices of materials and aspects of the production and its processes.
- The presentation takes place as a separate one from the semester project.
- Students will deliver a final documentation in which they represent the iterative process of each exercise. The format of the documentation will be defined and communicated two weeks before the end of the semester at latest.

Assessment for non-attending students

Even though it is possible to attend the exam as a non-attending student. Non-attending students need to schedule review sessions out of the official course time slots with the teacher in order to discuss the development of the project and the final presentation format. They will deliver a full documentation about the production processes and the design decisions.

Assessment language: English

Evaluation criteria and criteria for awarding marks

- Originality and coherence of the design project in relation to the use of materials and aspects of the production process.
- The ability of using the skills and knowledge learned through lectures and exercises.
- Effectiveness in communicating the project through oral and physical representation.
- Participation to the course activities.

Required readings

- “Cradle to Cradle: Remaking the Way We Make Things” by Michael Braungart and William McDonough.
- “The Craftman” by Richard Sennet.
- “Futuro Artigiano” by Stefano Micelli.
- “Autoprogettazione” by Enzo Mari.
- “In the Bubble. Designing in the Complex World” by John Thackara.
- “Materials Experience: Fundamentals of Materials and Design” by Elvin Karana, Owain Pedgley, Valentina Rognoli
- “It's Not Easy Being Green”, by Aart van Bezooijen and Paula Raché