



COURSE SYLLABUS

Industrial Design with a Focus on Sustainable Development

Industridesign med fokus på hållbar utveckling

30 credits / 30 högskolepoäng

Course code: UID 001

Established by: Head of Department, in consultation with ID Subject Council, 2021-05-11

Valid from: VT22

Educational level: First-cycle level

Subject group/Main field of study group: DE1 Design/21410 Design

Disciplinary domain: Design 100%

Division into course

components:

Module 1. *Design for sustainable development - focus on biomimicry and design from nature, 9 credits*

Modul 1. Design för hållbar utveckling med fokus på biomimik och naturinspirerad design, 9 hp

Module 2. *Design with an artistic focus, 9 credits*

Modul 2. Design och gestaltning med konstnärlig fokus, 9 hp

Module 3. The designer's professional contexts, 6 credits

Modul 3. Designerns omvärld och marknad, 6 hp

Module 4. *Design in collaboration with students from another programme at Konstfack, 3 credits*

Modul 4. Gestaltning i samverkan med studenter från annat program på Konstfack, 3 hp

Module 5. *Specialisation within visualisation and communication, 3 credits*

Modul 5. Specialisering inom visualisera och kommunicera, 3 hp

1. Main course content:

Module 1. Design for sustainable development with a focus on *biomimicry* and nature-inspired design, 9 credits

In this module, the student is introduced to the complexity of nature-inspired design methods and the reasons why they are critical for achieving ecological design solutions. The student develops and learns basic frameworks for nature-inspired sustainable design in relation to design ecology, a product's life cycle, and biomimicry. Based on nature's strategies, the student engages in exercises to develop design

proposals inspired by nature by applying methods on three levels: form, process, and system. In addition, the student will develop the ability to engage in critical reflection and thinking, along with awareness about sustainable design. By means of iterative prototype development, the student generates ideas inspired by nature for the purpose of developing ecological design proposals.

Module 2. Design with an artistic focus, 9 credits

Semiotics and 3D design

Practical and theoretical knowledge and skills are woven together here in the design process, with both aesthetic and semiotic concepts in focus. The module includes an exercise in distinguishing and applying concepts and an artistic, product-designed process. The student will engage in exercises to learn how to work in a collective process during the active formation of physical models, and also in an evaluation of the design process in relation to the results.

Exercises are engaged in here to develop the student's capability to discuss how intentions drive an exploration of form, space and materials. The student will also engage in exercises to systematically map out product areas and developing scenarios along with 2-D and 3-D sketching/model building. The student is encouraged to develop a high degree of independence and collaborative skills.

Module 3. The designer's professional contexts, 6 credits

A project is implemented with an organisation, a company, or within a specific field of work for the purpose of offering the student insights into various different types of work that a designer performs, as well as forms of collaborations and stakeholders that a designer will encounter. This module introduces key concepts, methods, and techniques used in marketing, and the student develops both a design proposal and a marketing plan. The module also includes a basic orientation in various needs and possibilities for design in a global marketplace. In addition the student is introduced to various perspectives on the market, sustainability and community-at-large to gain an increased understanding of the role of design in society.

Module 4. Design in collaboration with students from another programme at Konstfack, 3 credits

Students from Industrial Design, design proposals together with students from other programmes at Konstfack based on a theme designed to provide students from different programmes the opportunity to approach the task based on their respective knowledge, background and skills. The student offered training in the ability to interact and collaborate with other disciplines. They will also describe, analyse and interpret form, as well as critically reflect on their own and others' artistic approach.

Module 5. Specialisation within visualisation and communication, 3 credits

The student chooses a specialisation to immerse themselves in from one of the primary areas of visualisation and communication: 2-D, 3-D, photographs, or video. By means of the chosen specialisation, the student explores ways to visually communicate a selected project with relevance to the subject area. At the end of this module, the student compares their own selected visualisation method (2-D, 3-D, photographs or video) with any other visualisation method (2-D, 3-D, photographs or video) in a reflective text.

2. Intended learning outcomes:

Module 1. Design for sustainable development with a focus on biomimicry and nature-inspired design, 9 credits

After completing this module, the student shall:

- describe and explain relevant contemporary approaches, concepts and principles in relation to design for sustainable development,
- critically reflect and discuss the complexity of design for sustainable development in relation to nature,
- apply biomimicry and nature-inspired design to find innovative solutions for ecological design,
- create nature-inspired design proposals taking design for sustainable development into account,
- critically review another student's design proposals in relation to sustainable development,
- adequately show knowledge of sustainable development via the design and form of relevant design proposals.

Module 2. Design with an artistic focus, 9 credits

- After completing this module, the student shall be able to: define, evaluate and work with semiotic concepts, and apply them to physical models,
- define the primary categories and several selected concepts within a given 3-D aesthetic taxonomy,
- integrate semiotic and aesthetic concepts into a design process that results in physical prototypes which are related to usage and expression, plus describe the proposed design proposal,
- work collectively to develop a joint design process,
- critically discuss the usage and application of semiotic theory in design work,
- describe, analyse and interpret form, technology and content in an in-depth manner.

Module 3. The designer's professional contexts, 6 credits

- After completing this module, the student shall be able to: describe and explain the areas and contexts in which designers operate,
- reflect on the stakeholders a designer works together with and their different roles.
- reflect on how marketing techniques and design relate to communication,
- develop a design proposal that is related to a marketing plan,
- make assessments taking relevant societal and environmental aspects into account.
- describe and critically discuss marketing concepts, methods and techniques,
- adequately show the capability to transform ideas into design and form where products, services and systems are taken into consideration and relate to each other,
- design proposals with regard to various stakeholders from a holistic perspective.

Module 4. Design in collaboration with students from another programme at Konstfack, 3 credits

After completing this module, the student shall be able to:

- interact with other disciplines,
- orally and in writing describe and discuss one's own activities and artistic issues with different groups,
- describe, analyse and interpret form, technique and content, and critically reflect on their own artistic approach along with that of others.

Module 5. Specialisation within visualisation and communication, 3 credits

- After completing this module, the student shall be able to: explore a specialisation in one of the primary areas in visualisation and communication: 2-D, 3-D, photographs, or video,
- describe and explain how the choice of focus and specialisation is relevant to the industrial designer,
- communicate a design proposal by means of the selected visualisation method,
- adequately show the capability to identify their need for further knowledge so as to further develop their expertise,

- reflect in writing on the method of visualisation chosen in the module, and compare the pros and cons of this method relative to another visualisation method.

3. Entry requirements:

General entry requirements.

4. Grading scale:

The course uses the grading scale Pass (G) and Fail (U).

To receive the grade Pass (G), the expected learning outcomes must be achieved.

5. Forms of examination

The final grade is based on:

- written, oral and visual presentations and explanations, including a physical model in certain course elements,
- individual academic supervision and joint discussions,
- presentations during all parts of the course.

The examiner is responsible for producing grading criteria for the examination and for these being published on the intranet.

Students who receive the Fail grade in an examination are entitled to take a further five tests as long as the course is given in order to achieve a passing grade. Students who receive the grade Fail in an examination twice from an examiner are entitled to request that another examiner be appointed to grade the examination. The request is to be made to the Head of Department.

6. Reading List and other study material

The Reading List for the course literature will be stated in the respective module description.

7. Additional information

The Department is responsible for other essential information, such as detailed teaching methods and grading criteria, to be available for students prior to the start of the course.

This course may not be credited towards a degree on the first or second cycle together with similar courses taken and passed, where the contents are completely or partly the same as the contents of this course.

Students can request an examination, according to this course syllabus, to be carried out no more than twice during a two-year period after it has expired.

The course is compulsory.

The course is part of the Bachelor's Degree Programme in Industrial Design

The teaching is conducted primarily in Swedish, however teaching in English may occur.

The syllabus applies to exchange students, Programme term 4.