UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Design Methodology G2F

6 credits

Course code: IP521G
Version number: 3
Valid from: 1 July 2024
Ratified by: Curriculum Committee for Engineering Science
Date of ratification: 8 February 2024

1. General information about the course

The course is provided by the University of Skövde and is named Design Methodology G2F (Designmetodik G2F). It comprises 6 credits and is a first-cycle course. The level of progression is G2F.

The course is a part of the main field of study in Product Design Engineering. The course is a part of the subject of Integrated Product Development. The disciplinary domain of the course is Design.

2. Entry requirements

The course has the following entry requirements: passed IP337G Engineering Project II: Design G1F and passed IP345G Industrial Design G1F and passed IP344G CAD: Design for Manufacturing and Assembly G1F and attended IP504G User Centred Design G2F (or the equivalent).

3. Course content

This course aims to deepen students' knowledge of design methodology and its role in industrial product development processes.

In the course, students will study and discuss how design methodology can achieve efficiency and results of design activities within product development companies, both theoretically but also practically. The course also provides training in analysing previous and planning future design projects at the same time as the students' ability to orally and in writing communicate and discuss experiences and results are further developed.

4. Objectives

After completion of the course, the student shall be able to:

Knowledge and understanding

- critically and systematically categorise, evaluate and discuss design methods based on the purpose of different methods within a design process,

Proficiency and ability

- analyze and reflect on design methodology in connection with design work in industrial product development processes,
- explain and argue for suitable and improved design methodology based on an incomplete problem formulation,

Critcal judgement and approach

- critically and systematically discuss literature and practice linked to design work in industrial product development processes.

5. Examination

The course is graded VG (Pass with distinction), G (Pass) or U (Fail).

The examinations of the course consist of the following modes of assessment:

- **Individual assignment**
  3 credits, grades: VG/G/U (determines the final grade)
- **Project presentation**
  3 credits, grades: G/U

Students with a permanent disability who have been approved for directed educational support may be offered adapted modes of assessment.

6. Types of instruction and language of instruction

The teaching is comprised of lectures, group assignments, seminars and supervision.

The teaching is conducted in English.

7. Course literature and other educational materials

Cross, N. (2021). *Engineering design methods: strategies for product design* (5th ed.). John Wiley & Sons, Inc.. ISBN 9781119724377.

Various scientific articles and compendiums are made available via the learning platform at the start of the course.

Reference literature

Cross, N. (2006). *Designerly ways of knowing* (1st ed.). New York: Springer. ISBN 1846283000.

Norman, D. A., & Norman, D. A. (2013). *The design of everyday things* ((Revised and expanded edition.)). Basic Books. ISBN 9780262525671.

Ulrich, K., Eppinger, S. and Yang, M. (2020). *Product Design and Development* (7th ed.). McGraw-Hill Education. ISBN 1260043657.

Wikberg-Nilsson Å., Törlind P. & Ericson Å. (2021). *Design: Process och metod* (2:a upplagan). Lund: Studentlitteratur AB. ISBN 9789144143392.

8. Student influence

Student influence in the course is ensured by means of course evaluation. The students are informed about the results of the evaluation and potential measures that have been taken or are planned, based on the course evaluation.

9. Additional information

Further information about the course, as well as national and local governing documents for higher education, is available on the website of the University of Skövde.