UNIVERSITY OF SKÖVDE

TRANSLATION FROM SWEDISH

COURSE SYLLABUS

Industrial Ergonomics A1N

6 credits

Course code: VP706A
Version number: 6
Valid from: 1 July 2022
Ratified by: Curriculum Committee for Engineering Science
Date of ratification: 6 December 2021

1. General information about the course

The course is provided by the University of Skövde and is named Industrial Ergonomics A1N (Industriell ergonomi A1N). It comprises 6 credits and is a second-cycle course. The level of progression is A1N.

The course is a part of the main field of study in Virtual Product Realization. The disciplinary domain of the course is Technology.

2. Entry requirements

A Bachelor's degree equivalent to a Swedish kandidatexamen of 180 credits, within the main fields of integrated product development, production engineering, automation engineering, mechanical engineering or information technology (or the equivalent).

A further requirement is proof of skills in English equivalent of studies at upper secondary level in Sweden, known as the Swedish course English 6. This is normally demonstrated by means of an internationally recognized language test, e.g. IELTS or TOEFL.

3. Course content

The course addresses applications of ergonomics in industrial environments and how different types of user aspects can be integrated into the product realisation process. In order to demonstrate the breadth and depth of the interdisciplinary subject of ergonomics, the course discusses current research issues. Furthermore, the course also deals with objective and subjective evaluation methods as well as simulation and observational methods, but also methodology for enabling user-centred design of products, workplaces and systems.

4. Objectives

After completed course the student should be able to:

Knowledge and Understanding

- explain how ergonomics and different user aspects can be integrated into the product realisation process,
- identify and describe current research topics in the field of ergonomics,

Competence and Skills

- use ergonomic knowledge and computer-aided tools to design virtual and real user tests and experiments to evaluate products, environments and systems,
- analyse data from ergonomic surveys to evaluate products, environments and systems,

Critical Judgement and Approach

- analyse, discuss and reflect about the need to integrate ergonomics and user aspects into the product realisation process.

5. Examination

The course is graded A (Excellent), B (Very good), C (Good), D (Satisfactory), E (Sufficient) or F (Fail).

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

- **Individual assignment**
  3 credits, grades: A/B/C/D/E/F (determines the final grade)
- **Laboratory assignment**
  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 presentations, seminars/group discussions, lectures and laboratory sessions.

The teaching is conducted in English.

7. Course literature and other educational materials

Berlin C. & Adams C. (2017). *Production Ergonomics. Designing Work Systems to Support Optimal Human Performance*. London: Ubiquity Press. ISBN 9781911529125.

Articles, reports and manuals made available at course start.

Reference literature

Bridger R.S (2017). *Introduction to Human Factors and Ergonomics* (4th ed). Boca Raton: CRC Press. ISBN 9781498795944.

Salvendy, G. (2012). *Handbook of human factors and ergonomics* (4th ed). Hoboken, NJ: John Wiley & Sons. ISBN 9780470528389.

Ulrich, K.T. & Eppinger, S.D. (2011). *Product Design and Development* (5th edition). Boston: McGraw-Hill. ISBN 0071086951.

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.