COURSE SYLLABUS

Ergonomisimulering A1F
Ergonomics Simulation A1F
6 credits

1 Name, Scope and Level of the Course
The course is provided by the University of Skövde and is named Ergonomics Simulation A1F. It comprises 6 credits and is on advanced level. The level of progression of the course is A1F.

2 Objectives
After completed course the student should be able to:

Knowledge and understanding
- account for different methods for predicting and generating human motions in digital human modelling tools,
- account for different methods for digital human modelling tools to evaluate physical load when using products and workplaces.

Competence and skills
- use digital human modelling tools to evaluate and improve physical ergonomics of products and workstations,
- use digital human modelling tools for consideration of anthropometric diversity.

Critical judgement and approach
- reflect and discuss when and how ergonomics can be used to evaluate and improve the physical ergonomics of products and workplaces in a virtual product realization process.

3 Course Content
The course deals with how digital human modelling can be used to evaluate and improve the physical ergonomics of products and workplaces in a virtual product realisation process. Various methods for predicting and generating human motions are treated as well as methods for evaluating the physical load. The course also covers how ergonomic simulation tools can be used to consider anthropometric diversity and where in the product realisation process the use of ergonomic simulation tools fits in.

4 Forms of Teaching
The teaching comprises lectures, laboratory sessions, teaching lessons and seminars.

The teaching is conducted in English.

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

Registration of examination results:

<table>
<thead>
<tr>
<th>Name of examination</th>
<th>Credits</th>
<th>Grading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Written assignments</td>
<td>6 credits</td>
<td>A/B/C/D/E/F</td>
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1 Determines the final grade of the course.

Students with a permanent disability who have been approved for special educational support may be offered adapted or alternative examinations.
6 Admission Requirements
The prerequisite for this course are a Bachelor degree of at least 180 higher education credits (equivalent to 180 ECTS) within the fields of integrated product development, production engineering, automation engineering, mechanical engineering, information technology or similar and passed course VP706G Industrial Ergonomics A1N 6 credits.

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

7 Subject, Main Field of Study and Disciplinary Domain
The course forms a part of the academic subject area of Virtual Product Realization. The course is a part of the main field of study in Virtual Product Realization at the University of Skövde. The disciplinary domain of the course is Technology.

Every course at the University of Skövde belongs to a subject. The division of subjects is used for follow-up and quality assurance. A main field of study is an area in which a degree can be awarded. Disciplinary domain is a division which is used by the government for the allocation of resources for studies at basic level and advanced level.

8 Approval of Course and Course Syllabus
The course was approved by the Curriculum Committee for Engineering Science on 5 March 2018. This course syllabus was approved by the Curriculum Committee for Engineering Science on 4 June 2018. It is valid from 1 January 2019 and replaces the course syllabus approved 9 April 2018.

9 Overlapping with Another Course
This course cannot constitute a part of a degree also containing a course the content of which is totally or partly equivalent to the content of this course.

10 Additional Information
Further information will be available on the university’s website before a course is given.

National and local regulations for higher education are available on the university’s website.

Upon completion of the course there will be a follow-up. The main purpose of this follow-up is to contribute to improvements of the course. The students’ experiences and views constitute one of the criteria for the follow-up and are gathered by means of course evaluations. The students will be informed of the results of the follow-up and any decisions regarding actions that are to be taken.

11 Course Literature and Other Educational Materials
Articles, reports and manuals made available at course start.

Reference literature