1 Name, Scope and Level of the Course

The course is provided by the University of Skövde and is named Engineering Project III A1N. It comprises 6 credits and is on advanced level. The level of progression of the course is A1N.

2 Objectives

After completed course the student should be able to:

- apply previously acquired domain knowledge in a project related to virtual engineering,
- define, design and implement an efficient solution for a given problem using software tools in virtual engineering and based on a scientific method,
- consider sustainability and gender issues in the development and implementation of the solution,
- plan, monitor and document the project in a professional and structured way,
- use a scientific approach to analyze, evaluate and critically review the performance and delivered quality of the solution,
- present the problem and the solution orally to both researchers and industrial practitioners,
- write a scientific report detailing experimental observations and using evidence in a logical and critical way to support conclusions.

3 Course Content

The course aims for the students to gain experience of undertaking an engineering project within their specialization. In the course, the students are given a specific problem that they should solve using a virtual approach and based on a scientific method. The problem is related to ongoing industrial research undertaken at the University.

The course is divided into three parts. The first part of the project is focused on analyzing the given problem and gathering relevant information, and come up with a conceptual design for a solution. The second part is about implementing the solution into a working prototype. In the third part the solution is tested, evaluated and improved.

4 Forms of Teaching

The teaching comprises supervision, project work, seminars/group discussions and workshops.

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>Practical project work</td>
<td>3 credits</td>
<td>G/U</td>
</tr>
<tr>
<td>Scientific report</td>
<td>2.5 credits</td>
<td>A/B/C/D/E/F</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>0.5 credits</td>
<td>G/U</td>
</tr>
</tbody>
</table>
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 prerequisites 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 or production engineering or automation engineering or mechanical engineering or information technology or similar.

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 7 May 2018. It is valid from 1 January 2019.

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
Compendium
Reading material and research papers as provided by the instructor.