COURSE SYLLABUS

Artificiell Intelligens - industriellt projekt A1N
Artificial Intelligence - Industrial Project A1N
12 credits

Course Code: VP728A
The Course Syllabus is valid from: 1 July 2019
Date of Approval: 30 August 2019
Version Number: 2

1 Name, Scope and Level of the Course
The course is provided by the University of Skövde and is named Artificial Intelligence - Industrial Project A1N. It comprises 12 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:

- practically apply knowledge within Artificial Intelligence,
- solve industrial problems using techniques within Artificial Intelligence,
- construct software tools based on Artificial Intelligence,
- analyze results from the techniques of Artificial Intelligence from a sustainability perspective, including economic, societal and environmental dimensions,
- explain and discuss how Artificial Intelligence can support sustainable development and be a source for innovation.

3 Course Content
The course includes practical experience in independently solving industrial problems using the techniques of Artificial Intelligence. This work includes to formulate, solve and analyze advanced issues with a consideration to sustainability, taking into economic, societal and environmental aspects. The course work is conducted in projects where students work together to joint-ly present solutions including selected parts of Artificial Intelligence. The problems are solved entirely or partially by means of software tools. The course also includes oral and practical presentations of project results. Innovation theory will be applied to analyze and discuss the level of innovation in the problem solving process and in the developed solutions.

4 Forms of Teaching
The teaching comprises group assignments, supervision, project work, seminars/group discussions and seminars with guest lecturers.

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>Project assignment¹</td>
<td>6 credits</td>
<td>A/B/C/D/E/F</td>
</tr>
<tr>
<td>Written assignment</td>
<td>5 credits</td>
<td>G/U</td>
</tr>
<tr>
<td>Oral presentation</td>
<td>1 credits</td>
<td>G/U</td>
</tr>
</tbody>
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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
Prerequisite courses 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, 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 30 August 2019. This course syllabus was approved by the Curriculum Committee for Engineering Science on 30 August 2019. It is valid from 1 July 2019 and replaces the course syllabus approved 30 August 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
Course literature as prescribed by the instructor. Relevant real-world case studies and articles published in renowned journals and conferences will be employed during the course.