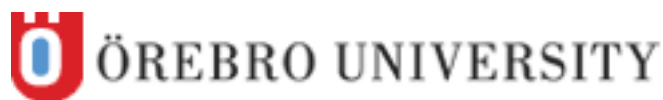

This course syllabus is discontinued or replaced by a new course syllabus.



Course Syllabus

School of Science and Technology

Computer Science, One-Year Master's Degree Project, Second Cycle, 15 Credits

Course Code:	DT4044	Subject Area:	Field of Technology
Main Field of Study:	Computer Science	Credits:	15
Education Cycle:	Second Cycle	Subject Group (SCB):	Computer Science
Established:	2013-10-23	Progression:	A1E
Valid from:	Spring semester 2019	Last Approved:	2018-09-28
		Approved by:	Head of School

Aims and Objectives

General aims for second cycle education

Second-cycle courses and study programmes shall involve the acquisition of specialist knowledge, competence and skills in relation to first-cycle courses and study programmes, and in addition to the requirements for first-cycle courses and study programmes shall

- further develop the ability of students to integrate and make autonomous use of their knowledge
- develop the students' ability to deal with complex phenomena, issues and situations, and
- develop the students' potential for professional activities that demand considerable autonomy, or for research and development work.

(Higher Education Act, Chapter 1, Section 9)

Course Objectives

Knowledge and Understanding

After completed studies, the student shall be able to demonstrate

- knowledge and understanding of robotics and intelligent systems, including both an overview of the field and specialised knowledge in certain areas of the field, as well as insight into current research and development work, and
- specialised methodological knowledge within robotics and intelligent systems.

Competence and Skills

After completed studies, the student shall be able to demonstrate

- the ability to integrate knowledge and to analyse, assess, and manage complex phenomena, issues and situations, even with limited knowledge
- the ability to independently identify and formulate issues as well as to plan and, using appropriate methods, undertake advanced tasks within predetermined time frames
- the ability to clearly account for and discuss his or her conclusions, both orally and in writing, including the knowledge and the arguments that they are based on, in dialogue with different audiences, and
- the skills required for participation in research and development work within robotics and intelligent systems, or employment in a similarly qualified capacity.

Judgment and Approach

After completed studies, the student shall be able to demonstrate

- the ability to make assessments in robotics and intelligent systems, informed by relevant disciplinary, social and ethical issues and also to demonstrate awareness of ethical aspects of research and development work

- demonstrate insight into the possibilities and limitations of research, its role in society and the responsibility of the individual for how it is used, and
- demonstrate the ability to identify the personal need for further knowledge and take responsibility for his or her ongoing learning.

Main Content of the Course

- Practical experience with modern algorithms, robots, and sensors
- problem formulation, data analysis
- independent implementation work
- task management: dividing a task into manageable subtasks and plan and following up on work load and time spent
- information management, ethical considerations in research
- report writing
- text review.

Teaching Methods

The course involves individual studies, project work, information gathering (literature review) and supervision.

Students who have been admitted to and registered on a course have the right to receive tuition and/or supervision for the duration of the time period specified for the particular course to which they were accepted (see, the university's admission regulations (in Swedish)). After that, the right to receive tuition and/or supervision expires.

Examination Methods

Master Thesis in Robotics and Intelligent Systems, 15 Credits. (Code: 0100)

Written thesis document. In order to pass, the work must also have been presented orally at a seminar.

For further information, see the university's local examination regulations (in Swedish).

Grades

According to the Higher Education Ordinance, Chapter 6, Section 18, a grade is to be awarded on the completion of a course, unless otherwise prescribed by the university. The university may prescribe which grading system shall apply. The grade is to be determined by a teacher specifically appointed by the university (an examiner).

According to regulations on grading systems for first- and second-cycle education (vice-chancellor's decision 2010-10-19, reg. no. CF 12-540/2010), one of the following grades is to be used: fail, pass, or pass with distinction. The vice-chancellor or a person appointed by the vice-chancellor may decide on exceptions from this provision for a specific course, if there are special reasons.

Grades used on course are Fail (U), Pass (G) or Pass with Distinction (VG).

Master Thesis in Robotics and Intelligent Systems

Grades used are Fail (U), Pass (G) or Pass with Distinction (VG).

The final grade is given by the grade for the thesis; provided that the oral defence and peer review is approved.

For further information, see the university's local examination regulations (in Swedish).

Specific entry requirements

At least 30 credits from Computer Engineering, Research methodologies for Intelligent Systems, Second Cycle, 30 Credits and Computer Science, Advanced Technologies for Intelligent Systems, Second Cycle, 15 Credits.

For further information, see the university's admission regulations (in Swedish).

Transfer of Credits for Previous Studies

Students who have previously completed higher education or other activities are, in accordance with the Higher Education Ordinance, entitled to have these credited towards the current programme, providing that the previous studies or activities meet certain criteria.

For further information, see the university's local credit transfer regulations (in Swedish).

Other Provisions

The course is given in English.

Reading List and Other Teaching Materials

Additional Reading

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Additions and Comments on the Reading List

Kurslitteratur fastställs av handledaren med hänsyn till projektarbetets karaktär.

Course literature is determined by the supervisor according to the nature of the project work.