ÖREBRO UNIVERSITET

Human Agent Interaction, 3,5 credits

Människa-agent-interaktion, 3,5 hp

Course Code/Codes	50DT052
Subject Area	Computer Science (datavetenskap)
School/equivalent	School of Science and Technology (Institutionen för naturvetenskap och teknik)
Valid from	2016-12-15
Approved	2016-12-15
Revised	,
Approved by	Head of School Peter Johansson
Translation to English, date and signature	, ,

1 Course content

The course discusses new and established research in the area of interaction between humans and intelligent software and hardware systems. The course will tackle multiple modes of interaction (gestures, natural language, …) with the human user adopting different roles (instructor, user). In addition to modern approaches for recognizing social signals, advanced end-user programming, also methods for evaluating human-agent interaction will be discussed.

2 Outcomes

2.1 The course in relation to the doctoral programme

The course shall primarily refer to the following intended learning outcomes for third-cycle courses and study programmes as described in the Higher Education Ordinance, i.e. the doctoral student shall demonstrate:

Knowledge and understanding
- broad knowledge and systematic understanding of the research field (part of outcome 1)
- advanced and up-to-date specialised knowledge in a limited area of this field (part of outcome 1)
- familiarity with the methods of the specific field of research in particular (part of outcome 2)

Competence and skills
- the capacity for scholarly analysis and synthesis (part of outcome 3)
- the capacity to review and assess new and complex phenomena, issues and situations autonomously and critically (part of outcome 3)
- the ability to review and evaluate research and other qualified tasks (part of outcome 4)

- the ability to plan and use appropriate methods to undertake research and other qualified tasks within predetermined time frames (part of outcome 4)

Judgement and approach
- intellectual autonomy and disciplinary rectitude (part of outcome 9)

The intended learning outcomes are listed in the same order as in the general syllabus for the programme.

2.2   Intended course learning outcomes

To obtain a passing grade, the doctoral student shall demonstrate:

Knowledge and understanding
- broad knowledge on up-to-date approaches and components for natural interaction between humans and virtual agents/robots
- the ability to report on promises and challenges related to different interaction modes in social robotics
Competence and skills
- the competence to review scientific texts on advanced topics in Human-Robot Interaction as well as in the area of Intelligent Virtual Agents
- the ability to design interaction interfaces between humans and agents appropriate for their respective purpose.
Judgement and approach
- the ability to reflect on principles of good interaction design
- the ability to evaluate interaction interfaces between humans and agents

3   Reading list and other teaching material

The following course readings and teaching material will be used on the course:

The following course readings and teaching material will be used on the course. A particular selection of recent journal articles adapted to the actual needs and interests of the students will be added when suitable.

Rogers Yvonne, Sharp Helen and Jenny Preech (latest edition)
Interaction Design: Beyond Human-Computer Interaction
John Wiley & Sons

Lieberman Henry, Paternó Fabio and Volker Wulf (latest edition)
End-User Development
Springer

Boy Guy A. (latest edition)
The Handbook of Human-Machine Interaction: A Human Centered Approach
Ashgate Publishing Lt.

4   Teaching formats

Teaching on the course takes the following format:

Teaching on the course takes place in lectures and seminars. In the seminars, the students will present an analysis of particular suited newly published work as well as discuss human-agent interaction design and evaluation.

5   Examination

The course is assessed through an examination in the format of

Participation in seminaries and a written report after each seminar

For examinations consisting of several examination components, the following applies: If during the course it is concluded that a doctoral student is unable to complete a certain examination component, the examiner may set a substitute assignment provided that circumstances do not reasonably allow for the course component to be completed at a later date during the run of the course.

6   Grades

Examinations on third-cycle courses and study programmes are to be assessed according to a two-grade scale with either of the grades 'fail' or 'pass' (local regulations).

The grade shall be determined by a teacher specifically nominated by the higher education institution (the examiner) (Higher Education Ordinance).

To obtain a passing grade on examinations included in the course, the doctoral student is required to demonstrate that he/she attains the intended course learning outcomes as described in section 2.2. Alternatively, if the course consists of multiple examinations generating credit, the doctoral student is required to demonstrate that he/she attains the outcomes that the examination in question refers to in accordance with section 5.

A student who has failed an examination is entitled to a retake.

If an examination consists of several examination components, and a student fails an examination component, the examiner may, as an alternative to a retake, set a make-up assignment with regard to the examination component in question.

A doctoral student who has failed an examination twice for a specific course or course element is entitled, upon his/her request, to have another examiner appointed to determine the grade.

7   Admission to the course

7.1   Admission requirements

To gain access to the course and complete the examinations included in the course, the applicant must be admitted to a doctoral programme at Örebro University.

7.2   Selection

Selection between applicants who have been admitted to doctoral programmes at Örebro University and who otherwise meet the admission requirements as listed above is made according to the following order of precedence:

If no other selection criteria are specified in this section, priority shall be given to applicants with a lower number of course credits left before the award of their degree over applicants with a higher number of remaining course credits. Should two or more students have equal number of credits,

selection will be done through the drawing of lots. This also applies within any selection groups listed unless otherwise stated.

7.3   Other applicants than doctoral students admitted at Örebro University

Other applicants than doctoral students admitted at Örebro University may be given access to the course on the grounds of provisions for and/or agreements regarding contracted courses, joint degrees, national graduate schools or cooperation in other respects with other universities.

Any decisions on what such other applicants may be given access to the course are made separately and on the basis of the provisions and/or agreements that occasion the student to apply for the course.

For participation in the course in other respects, the same provisions shall apply as for doctoral students admitted to Örebro University.

8   Transfer of credits for courses, study programmes and other experience

Provisions on the transfer of credits can be found in the Higher Education Ordinance and on the university's webpage.

9   Other information

The course is taught in English.

Transitional provisions

None.