ÖREBRO UNIVERSITET

Course syllabus
Third-cycle courses and study
programmes

This is a translation of a Swedish
document. In the event of a
discrepancy, the Swedish-language
version shall prevail.

Advanced Project Work in Computer Vision, 7,5 hp

Avancerat projektarbete inom datorseende 7,5 hp

Course Code/Codes	50DT070
Subject Area	Computer Science
School/equivalent	School of Science and Technology
Valid from	02/01/2026
Approved	2026-01-14
Revised	
Approved by	Head of School
Translation to English, date and signature	2026-01-07 S.L

1   Course content

This course allows PhD students to gain deeper insight into advanced computer vision techniques by designing, implementing, and evaluating a system to solve a challenging computer vision problem.

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
  - 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 ability to identify and formulate issues with scholarly precision critically, autonomously and creatively (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)

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:

• Competence in analyzing a problem scenario and designing a computer vision system targeted at solving the problem.
• Competence in analyzing the available tools and methods that could be deployed in solving the target problem.
• Competence in judging the suitability of different methods to solve the target problem.
• Ability to diagnose problems and implement solutions to incrementally refine the design and functionality of an computer vision system.

3 Reading list and other teaching material

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

This course is project-based and as such the intended reading will consist of relevant research papers and technical documentation. These will be specifically chosen by the instructor based on the selected project topic.

4 Teaching formats

Teaching on the course takes the following format:

Teaching on the course takes the format of a series of technical integration meetings and a final demonstration. Students will work individually and in groups in a self-organized manner to achieve selected sub-goals.

5 Examination

The course is assessed through an examination in the format of

- an oral examination in the form of a presentation. Each student needs to explain the theoretical background and technical design of the implemented work and present the detailed working of the modules they contributed to implementing.

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.

Moreover, the applicant shall be admitted as a doctoral student within the subject area of computer science, or demonstrate corresponding knowledge as determined by the course responsible.

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:

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

This course is given in English

Transitional provisions