

# Advanced Image Processing

Programme course

6 credits

Avancerad bildbehandling

TNM034

Valid from: 2017 Spring semester

**Determined by**

Board of Studies for Computer Science  
and Media Technology

**Date determined**

2017-01-25

## Main field of study

Media Technology and Engineering

## Course level

Second cycle

## Advancement level

A1X

## Course offered for

- Media Technology and Engineering, M Sc in Engineering

## Entry requirements

Note: Admission requirements for non-programme students usually also include admission requirements for the programme and threshold requirements for progression within the programme, or corresponding.

## Prerequisites

Image Processing and Analysis. Programming skills in Matlab.

## Intended learning outcomes

The students will learn advanced image processing and current research issues in the domain of the project. After the course the students will be able to:

- plan how to solve the project goals
- describe the project context and the theories behind the solution
- identify and implement a particular solution to the problem
- compile a report over the project describing the implementation and the algorithms used

## Course content

Advanced methods for image processing and analysis in the area of the project task.

## Teaching and working methods

The course is delivered as laboratory work and lectures. The laboratory work is in the form of a group project that solves an advanced image processing task. Each group is between 2 and 4 students

## Examination

UPG1                  Project                  6 credits                  U, 3, 4, 5

The students are required to deliver a report that contains a description of the problem, the chosen theory and methodology for how to solve the problem and the program implementation. Grades from 3 to 5 are given according to the evaluation of the report, the performance of the implementation and if applicable the oral examination. The students that have got grade 4 based on their report and program performance may get grade 5 if they can elaborate orally about the project before a teacher committee.

## Grades

Four-grade scale, LiU, U, 3, 4, 5

## Department

Institutionen för teknik och naturvetenskap

## Director of Studies or equivalent

Camilla Forsell

## Examiner

Daniel Nyström

## Course website and other links

## Education components

Preliminary scheduled hours: 40 h

Recommended self-study hours: 120 h

## Course literature

### Additional literature

#### Articles

## Common rules

Regulations (apply to LiU in its entirety)

The university is a government agency whose operations are regulated by legislation and ordinances, which include the Higher Education Act and the Higher Education Ordinance. In addition to legislation and ordinances, operations are subject to several policy documents. The Linköping University rule book collects currently valid decisions of a regulatory nature taken by the university board, the vice-chancellor and faculty/department boards.

LiU's rule book for education at first-cycle and second-cycle levels is available at [http://stydokument.liu.se/Regelsamling/Innehall/Utbildning\\_pa\\_grund-\\_och\\_avancerad\\_niva](http://stydokument.liu.se/Regelsamling/Innehall/Utbildning_pa_grund-_och_avancerad_niva).