

	Tue Oct 6	Wed Oct 7	Tue Oct 13	Wed Oct 14	Tue Oct 20	Wed Oct 21	Tue Oct 27	Wed Nov 4	Tue Nov 10	Tue Nov 17	Wed Nov 25	Wed Dec 2
10:15-12:00		L3	L6	Ex1	Ex2	L9	L10	Oral Exam	P1	P2	P report in	P present.
13:15-15:00	L1	L4	L7			Ex3	extra					
15:15-17:00	L2	L5		L8			P intro					

Lecturer

PART 1 - Lectures: Basic image analysis methods

DM	L1 Introduction (presentation, digitization, project intro, file formats/compression)
RS	L2 Pointwise operations/Image transforms
CW	L3 Filtering and pre-processing + morphology
AB	L4 Color + multispectral images
CA	L5 Segmentation + distance transform
DM	L6 Feature extraction
DM	L7 Classification I
IMS	<i>Ex1 ImageJ</i>
DM	L8 Classification II, machine learning
AK	<i>Ex2 Ilastik</i>
DM	L9 Deep learning and AI in image analysis
AK	<i>Ex3 CellProfiler</i>
CW	L10 Research methodology and research ethics in image analysis
DM	extra time for questions etc
DM	Oral Exam on Zoom
DM, IMS, RS, CW	P1
DM, IMS, RS, CW	P2
DM, ???	P presentations

DM: Damian Matuszewski
 RS: Robin Strand
 CW: Carolina Wählby
 AB: Anders Brun
 CA: Christophe Avenel
 IMS: Ida-Maria Sintorn
 AK: Anna Klemm

PART 2 - Applications and advanced topics

P intro is an introduction to the project work
 P1 Project specific lectures/seminars and discussion of project plans
 P2 Project specific lectures and feedback on project progression
 P report deadline
 P presentations in the form of a mini-symposium

Examples of project specific lectures and advanced topics

Interactive/advanced image segmentation
 Image registration
 Hands-on exercise on 3D slicer
 Electron Microscopy image analysis
 Cell image analysis
 Image-based screening
 Hands-on advanced functions in CellProfiler and CellProfiler Analyst
 Deconvolution
 Deep learning in practice
 Image analysis using Matlab