

Schedule for Image and System Analysis (FK7064) 9 hp, HT 2024

Activities in **RED** are mandatory to attend

Week	Day	Date	Time	Teaching Activity	Teacher	Room	Literature*
36	Monday	02.09	09:00-10:00	Introduction to clinical practice	EKL	Bo Nilsson Lecture Room	
			10:00-12:00	Introduction to image analysis	ML	Bo Nilsson Lecture Room	1
	Tuesday	03.09	09:00-12:00	Imaging fundamentals	MA	MSF Library	
	Wednesday	04.09	09:00-12:00	Spatial domain techniques	MA	Bo Nilsson Lecture Room	3
	Thursday	05.09	09:00-12:00	Frequency domain techniques	MA	Bo Nilsson Lecture Room	4
37	Monday	09.09	09:00-12:00	Filtering in frequency domain	MA	Bo Nilsson Lecture Room	
	Tuesday	10.09	09:00-12:00	Introduction to MATLAB exercises	MA	Bo Nilsson Lecture Room	5
	Wednesday	11.09	09:00-15:00	Laboratory exercise 1: Spatial & Frequency domain techniques	MA	Computer room	
	Thursday	12.09	09:00-12:00	Image restoration and tomography	MA	Bo Nilsson Lecture Room	5
38	Monday	16.09	09:00-12:00	Color image processing and eye	MA	Bo Nilsson Lecture Room	6 & 2(eye)
	Tuesday	17.09	09:00-12:00	Image compression	MA	Bo Nilsson Lecture Room	8
	Wednesday	18.09	09:00-12:00	Calculation exercises	MA	Bo Nilsson Lecture Room	
	Thursday	19.09	--	Medical image formats, coordinate systems	CW	Flipped class	2.4.2-2.4.3
				Image segmentation	CW		9.1-9.3, 10.3.1, 10.4-10.5
				Image registration	RM		
Friday	20.09	09:00-10:00	Image segmentation – tutoring & discussion	MA	Bo Nilsson Lecture Room		
		10:00-12:00	Laboratory exercise 2: Image segmentation	MA	Computer room		
39	Monday	23.09	13:00-14:00	Image registration – tutoring & discussion	RM	Bo Nilsson Lecture Room	
			14:00-16:00	Visualization and applications			
	Tuesday	24.09	10:00-12:00	Laboratory exercise 3: Image registration	MA	Computer room	
			13:00-15:00	Laboratory exercise 4: Visualization & applications			
Wednesday	25.09	10:00-12:00	Seminar: Introduction to AI and deep learning	MA	Bo Nilsson Lecture Room		
40	Monday	30.09	13:00-15:00	Receiver operating characteristic (ROC) analysis	IT-D	Bo Nilsson Lecture Room	Lecture notes
	Tuesday	01.10	09:30-10:30	Visual grading	ÖS	Bo Nilsson Lecture Room	
	Wednesday	02.10	10:00-12:00	Statistics 1	C-BL	Bo Nilsson Lecture Room	Lecture notes
	Thursday	03.10	10:00-12:00	Statistics 2	C-BL	Bo Nilsson Lecture Room	Lecture notes
41	Tuesday	08.10	09:00-14:00	Exam		Bo Nilsson Lecture Room	

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Literature: Gonzalez & Woods: Digital image processing - Fourth Edition

Chapter number in *Literature

Lecturers

ML	Marta Lazzeroni, Senior Lecturer, Stockholm University
EKL	Emely Kjelsson Lindblom, Senior Lecturer, Stockholm University
MA	Mehdi Astaraki, Postdoc researcher, Stockholm University
IT-D	Iuliana Toma-Dasu, Professor, Stockholm University
C-BL	Chun-Biu Li, Associate Professor, Stockholm University
CW	Chunliang Wang, Associate Professor, School of Technology and Health, KTH, Stockholm
RM	Rodrigo Moreno, Professor, School of Technology and Health, KTH, Stockholm
ÖS	Örjan Smedby, Professor, School of Technology and Health, KTH, Stockholm