

Schedule for Image and System Analysis (FK7064) 9 hp, HT 2025

Activities in **RED** are mandatory to attend

Week	Day	Date	Time	Teaching Activity	Teacher	Room	Literature*
36	Monday	09-01	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	09-02	09:00-12:00	Imaging fundamentals	MA	MSF Library	
	Wednesday	09-03	09:00-12:00	Spatial domain techniques	MA	Bo Nilsson Lecture Room	3
	Thursday	09-04	09:00-12:00	Frequency domain techniques	MA	Bo Nilsson Lecture Room	4
	Friday	09-05	Self-study				
37	Monday	09-09	09:00-12:00	Introduction to MATLAB and Python	MA	Computer room	
	Tuesday	09-10	09:00-12:00	Filtering in frequency domain	MA	Bo Nilsson Lecture Room	
	Wednesday	09-11	09:00-12:00	Laboratory exercise 1: basic image processing and enhancement	MA	Computer room	5
	Thursday	09-12	09:00-12:00	Image restoration and tomography	MA	Bo Nilsson Lecture Room	5
	Friday	09-13	09:00-15:00	Laboratory exercise 2: Spatial & Frequency domain techniques	MA	Computer room	
	Friday	09-13	13:00-16:00	Calculation exercises 1	MA	Bo Nilsson Lecture Room	
38	Monday	09-15	09:00-12:00	Color image processing and eye	MA	Bo Nilsson Lecture Room	6 & 2(eye)
	Tuesday	09-16	09:00-12:00	Image compression	MA	Bo Nilsson Lecture Room	8
	Wednesday	09-17	09:00-12:00	Calculation exercises 2	MA	Bo Nilsson Lecture Room	
	Thursday	09-18	09:00-12:00	Image segmentation	MA	Bo Nilsson Lecture Room	Lecture notes
	Thursday	09-18	13:00-16:00	Laboratory exercise 3: Image segmentation		Computer room	
	Friday	09-19	--	Medical image formats, coordinate systems	CW	Flipped class	2.4.2-2.4.3
Image registration				RM			
39	Monday	09-22	Self-study				
	Tuesday	09-23	13:00-15:00	Receiver operating characteristic (ROC) analysis	IT-D	Bo Nilsson Lecture Room	Lecture notes
	Wednesday	09-24	13:00-15:00	Statistics 1	C-BL	Bo Nilsson Lecture Room	Lecture notes
	Thursday	09-25	13:00-15:00	Statistics 2	C-BL	Bo Nilsson Lecture Room	Lecture notes
	Friday	09-26	09:00-10:30	Image registration – tutoring & discussion	RM	Bo Nilsson Lecture Room	Lecture notes
			10:30-12:00	Visualization and applications			
40	Monday	09-29	10:00-12:00	Laboratory exercise 4: Image registration	MA	Computer room	
			13:00-15:00	Laboratory exercise 4: Visualization & applications			
	Tuesday	09-30	10:00-12:00	Seminar: Introduction to AI and deep learning	MA	TBA	
	Wednesday	10-01	09:00-12:00	Calculation exercises 3	MA	TBA	
41	Tuesday	10-07	09:00-14:00	Exam		TBA	

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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