

Schedule 25'

Week		Block	Lecture	Exercises	
1	21.02.2025	<u>I. Fundamentals</u>	Recursive least-square	Exercises pre-test 1 (LS & RLS)	
2	28.02.2025		Stochastic processes	LAB 1	5%
3	07.03.2025		Reference frames	IMU tutorial + Exercises pre-test 2	
4	14.03.2025		Rotations in space [dR, exp(dR)]	Exercise on derivation a-frame	
5	21.03.2025	<u>II. Inertial</u>	Numerical integration	LAB 2(4) - errorless INS	5%
6	28.03.2025		Navigation equations	LAB 3(5) - realistic INS	5%
7	04.04.2025		Static initialization	LAB 4(6) w. acquisition	5%
8	25.04.2025		Strapdown INS	Exercises pre-test 3	
9	11.04.2025	Eeastern FRI			
		Eeastern PAUSE			
10	02.05.2025	<u>III. Fusion</u>	MIDTERM (20%)+KF basic	LAB 5(7) KF (a=0)	
11	09.05.2025		Extended Kalman Filter (EKF)	LAB 5(7)	5%
12	16.05.2025		INS/GPS Integration, error states	LAB 6 a	
13	23.05.2025		Direct sensor orientation	LAB 6 b	
14	30.05.2025		Presentations, EKF bis	LAB 6 c	5%
		Midterm			20%
		Labs			30%
		Oral Exam (presentation of sensors)			5%
		Oral Exam (excluding presentation of sensors)			45%
		TOTAL			100%