



COURSE: Control Engineering II

DEGREE: Industrial Electronics and Automation Engineering

YEAR: 3th

TERM: 2nd

The subject is divided into 28 sessions within 14 weeks. The labs could be changed to another week (the final dates will be announced in Aula Global). There are two sessions per week except in some cases with three sessions.

WEEKLY PLANNING									
WEEK	SESSION	DESCRIPTION	GROUPS (mark X)		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENT		
			LECTURES	SEMINARS			DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Z Transform	X			NO		1,66	4
2	2	Problems Z Transform		X		NO		1,66	
2	3	Transfer Function of Discrete Systems	X			NO		1,66	4
3	4	Problems Transfer Function of Discrete Systems		X		NO		1,66	
3	5	Stability Analysis	X			NO		1,66	4
4	6	Problems Stability Analysis		X		NO		1,66	
4	7	Discretization	X			NO		1,66	4
5	8	Problems Discretization		X		NO		1,66	
5	9	PID Controllers in Discrete Time	X			NO		1,66	4
6	10	Problems PID Controllers in Discrete Time I		X		NO		1,66	
6	11	Design of Controllers via Direct Synthesis	X			NO		1,66	

7	12	Problems PID Controllers in Discrete Time II / Problems Direct Synthesis I		X		NO		1,66	4
7	13	Modelling and Analysis in State Space I	X			NO		1,66	4
8	14	Problems Direct Synthesis II		X		NO		1,66	
8	15	Modelling and Analysis in State Space II	X			NO		1,66	6
9	16	Problems Modelling and Analysis in State Space I		X		NO		1,66	
9	17	*Lab session 1: PID		X	Lab.	NO	Lab Session Report	1,66	4
9	18	First partial exam	X			YES		1,66	
10	19	Problems Modelling and Analysis in State Space II		X		NO		1,66	4
10	20	Solving the State Equation	X			NO		1,66	
11	21	Problems Solving the State Equation		X		NO		1,66	6
11	22	State Feedback Control I	X			NO		1,66	
12	23	Problems State Feedback Control I		X		NO		1,66	6
12	24	*Lab session 2: Direct Synthesis		X	Lab.	NO	Lab Session Report	1,66	
12	25	State Feedback Control II	X			NO		1,66	6
13	26	Problems State Feedback Control II		X		NO		1,66	
13	27	*Lab session 3: State Feedback Control		X	Lab.	NO	Lab Session Report	1,66	4
13	28	Design of State Observers	X			NO		1,66	
14	29	Problems State Observers		X		NO		1,66	4
14	30	Second partial exam	X			YES		1,66	
Subtotal 1								49,8	62
Total 1 (Hours of class plus student homework hours between weeks 1-14)								111,8	
15		Tutorials, handing in, etc							
16		Assessment							
17									
18									
Subtotal 2								3	15
Total 2 (Hours of class plus student homework hours between weeks 15-18)								18	
TOTAL (Total 1 + Total 2. Maximum 180 hours)								129,8	

* Due to COVID situation, practical sessions could suffer changes in dates. Final dates will be published in Aula Global at the beginning of the course.