



COURSE: Linear Systems		
DEGREE: GTT ; GSC ; GT ; GSA	YEAR: 2nd	TERM: 2nd

WEEKLY PROGRAMMING									
WEEKNA	SESIÓN	DESCRIPTION	GROUP		SPECIAL ROOM FOR SESSION (Computer class room, audio-visual class room)	Indicate YES/NO If the session needs 2 teachers	WEEKLY PROGRAMMING FOR STUDENTS		
			LECTUR E	SEMI NAR			DESCRIPTION	CLASS HOURS	HOMEWO RK HOURS (MAXIMU M 7)
1	1	Course presentation	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
1	2	Unit 0. Review of Signals and Systems in time domain Lesson 0. Review of Signals and Systems in time domain (Systems and Circuits)		X		NO	Study of current week lesson Home solving of selected problems	1,66	
2	3	Lesson 0 assessment Unit 1. Fourier Series Representation (FSR) Lesson 1. Continuous-Time Signals FSR	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
2	4	Exercises about FSR of continuous-time signals		X		NO	Study of current week lesson Home solving of selected problems	1,66	
3	5	Unit 1. Fourier Series Representation (FSR) Lesson 2. FSR of sequences Exercises about continuous- and discrete-time signals	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
3	6	Exercises about FSR of sequences		X		NO	Study of current week lesson Home solving of selected problems	1,66	

4	7	Lessons 1 and 2 assessment Unit 1. Fourier Series Representation (FSR) Lección 3. Output of LTI systems for complex exponential inputs. Filtering using FSR of periodic signals	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
4	8	Lab Session #1		X	Lab room	YES	Study of current week lesson Home solving of selected problems	1,66	
5	9	Unit 2. Fourier Transform (FT) Lesson 4. Continuous-time signals FT	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
5	10	Exercises about continuous-time signals FT		X		NO	Study of current week lesson Home solving of selected problems	1,66	
6	11	Unit 2. Fourier Transform (FT) Lesson 5. Sequences FT Exercises about continuous- and discrete-time FT	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
6	12	Exercises about continuous- and discrete-time FT		X		NO	Study of current week lesson Home solving of selected problems	1,66	
7	13	Lessons 4 and 5 assessment Unit 2. Fourier Transform (FT) Lesson 6. Signal filtering using FTs	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
7	14	Lesson 6. Signal filtering using FTs Exercises about FT		X		NO	Study of current week lesson Home solving of selected problems	1,66	
8	15	Unit 3. Sampling Lesson 7. Continuous-time signals sampling. Aliasing	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
8	16	Lab Session #2		X	Lab room	YES	Study of current week lesson Home solving of selected problems	1,66	
9	17	Lessons 3 and 6 assessment Unit 3. Sampling Lesson 8. Discrete-time processing of continuous-time signals	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
9	18	Sampling exercises		X		NO	Study of current week lesson Home solving of selected problems	1,66	
10	19	Unit 3. Sampling Lesson 9. Decimation and interpolation Exercises about sampling, decimation and interpolation	X			NO	Study of current week lesson Home solving of selected problems	1,66	6
10	20	Exercises about sampling, decimation and interpolation		X		NO	Study for the Intermediate Assessment	1,66	
11	21	Unit 4. Discrete Fourier Transform (DFT) Lesson 10. DFT. Concept and fundamental properties	X			NO	Preparación de la Prueba de Evaluación Intermedia	1,66	6
11	22	Intermediate Exam. Units 0 – 3		X		NO	Study of current week lesson Home solving of selected problems	1,66	

12	23	Unit 4. Discrete Fourier Transform Lección 11. Linear convolution calculation using DFTs DFT exercises	X			NO	Study of current week lesson Home solving of selected problems	1,66	7
12	24	Lab Session #3		X	Lab room	YES	Study of current week lesson Home solving of selected problems Group work on the lab project	1,66	
13	25	Lessons 10 and 11 assessment Unit 5. Z transform (TZ) Lesson 12. TZ	X			NO	Study of current week lesson Home solving of selected problems	1,66	7
13	26	Lesson 12. TZ (II) Exercises about TZ		X		NO	Study of current week lesson Home solving of selected problems Group work on the lab project	1,66	
14	27	Unit 5. Z transform (TZ) Lesson 13. ROC properties. System characterization	X			NO	Study of current week lesson Home solving of selected problems Group work on the lab project	1,66	7
14	28	Exercises about TZ		X		NO	Study of current week lesson Home solving of selected problems Group work on the lab project	1,66	
12	29	Lab Session #4		X	Lab room	YES	Group work on the lab project	1,66	
Subtotal 1								48,33	87
Total 1 (Homework and class hours in weeks 1-14)								135,33	
15		(Volunteer) Lessons 12 and 13 assessment Lab Project Assessment Recovery of sessions, tutor sessions, report deliveries, etc						14,66	
16		Final exam preparation. Final exam					Study for the final exam	30	
17									
18									
Subtotal 2								44,66	
Total 2 (Homework and class hours in weeks 15-18)									
TOTAL (Total 1 + Total 2. Max 180 hours)								180	