Universidad Carlos III de Madrid
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COURSE: ELECTRIC POWER ENGINEERING FUNDAMENTALS		
DEGREE:	**YEAR: 2**	**TERM: 1**

La asignatura tiene 29 sesiones que se distribuyen a lo largo de 14 semanas. Los laboratorios pueden situarse en cualquiera de ellas. Semanalmente el alumnos tendrá dos sesiones, excepto en un caso que serán tres

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	Subject presentation. Evaluation and working plan of the course. General concepts: voltage, current, power. Electric Circuits. Power balance.		X		NO		1,6	
1	2	Resistance: Ohm's law. Ideal voltage and current sources. Kirchhoff's Laws.	X			NO	Read summary, watch video & solve exercises	1,6	2
2	3	DC problem solving		X		NO	Solve the proposed exercises	1,6	
2	4	Association of resistances. Voltage and current divider. Dependent sources. Real sources. Source equivalence.	X			NO	Read summary, watch video & solve exercises	1,6	4

3	5	DC problem solving		X		NO	Solve the proposed exercises	1,6	
3	6	Nodal and mesh circuit analysis.	X			NO	Read summary, watch video & solve exercises	1,6	5
4	7	DC problem solving		X		NO	Solve the proposed exercises	1,6	
4	8	Thévenin and Norton, Max power transfer	X			NO	Read summary, watch video & solve exercises	1,6	5
5	9	LAB 1		X		NO	Prepare lab session 1	1,6	
5	10	Inductors and capacitors. Fundamentals of a.c. electric power systems Complex phasors representation of sinusoidal signal.	X		LAB	NO	Read summary, watch video & solve exercises	1,6	5
6	11	DC EXAM		X		NO	Prepare exams	1,6	
6	12	Passive elements operation under sinusoidal excitation. Impedance.	X			NO	Read summary, watch video & solve exercises	1,6	7
7	13	AC problem solving. Guillermo 2.15 y Julio a2		X		NO	Solve the proposed exercises	1,6	
7	14	Power in AC. Power factor. Julio a28 y a29	X			NO	Read summary, watch video & solve exercises	1,6	5
8	15	LAB 2		X		NO	Prepare lab session 2	1,6	
8	16	Proportionnality & Superposition Coupled inductors: presentation	X			NO	Read summary, watch video & solve exercises	1,6	5
9	17	AC problems solving		X		NO	Solve the proposed exercises	1,6	
9	18	AC problems solving. pf compensation	X			NO	Solve the proposed exercises	1,6	5
10	19	AC problems solving		X		NO	Solve the proposed exercises	1,6	
10	20	Three-phase systems. Line and phase current and voltage. Single-phase equivalent circuit	X			NO	Read summary, watch video & solve exercises	1,6	5
11	21	AC EXAM		X		NO	Prepare exam	1,6	
11	22	Power in a three-phase system. Reactive power compensation	X		LAB	NO	Read summary, watch video & solve exercises	1,6	7
12	23	3PH problem solving		X		NO	Solve the proposed exercises	1,6	
12	24	3PH problem solving	X			NO	Solve the proposed exercises	1,6	7
13	25	LAB 3		X		NO	Prepare lab session 3	1,6	
13	26	Power measuring in three-phase systems	X			NO	Read summary, watch video & solve exercises	1,6	7

14	27	3PH problem solving		X		NO	Solve the proposed exercises	1,6	7
14	28	3PH problem solving	X		LAB	NO	Solve the proposed exercises	1,6	7
	29	Lab exam + 3PH exam		X		NO	Prepare exams	1,6	7
							Subtotal 1	**48,33**	**83**
							Total 1 *(Hours of class plus student homework hours between weeks 1-14)*	131,33	

15		Tutorials, handing in, etc						10	
16		Assessment						3	10
17									
18									
							Subtotal 2	**3**	**20**
							Total 2 *(Hours of class plus student homework hours between weeks 15-18)*	23	

TOTAL *(Total 1 + Total 2. Maximum 180 hours)*	**154,33**