Universidad Carlos III de Madrid

COURSE: PHOTONICS TECHNOLOGY III(6 ECTS)		
MASTER: Master in Photonics Engineering	**YEAR: 2017-2018**	**TERM: 1st**

WEEKLY PLANNING

SESSION	DESCRIPTION	GROUPS (mark X)		Special room for session (computer classroom, audio-visual classroom…)	WEEKLY PROGRAMMING FOR STUDENT		
		LECTURES	SEMINARS/ LAB[1]		DESCRIPTION	CLASS HOURS	HOMEWORK HOURS
1	**0.Introduction**	X			Introduction to the subject	1,5	15
2	**I: Receivers in Photonic Systems** Photodetectors (I)	X			Previous reading and revision of class materials	1,5	
3	**I: Receivers in Photonic Systems** Photodetectors (II)	X			Previous reading and revision of class materials	1,5	
4	**I: Receivers in Photonic Systems** Photodetectors (III)	X			Previous reading and revision of class materials and proposed exercises	1,5	
5	**I: Receivers in Photonic Systems** Amplifiers and Conditioning Circuits (I)	X			Previous reading and revision of class materials	1,5	
6	**I: Receivers in Photonic Systems** Amplifiers and Conditioning Circuits (II)	X			Previous reading and revision of class materials and proposed exercises	1,5	

7	**Laboratory Session P1.** Characterization of Photodetectors (I)		X		Revision of previous class materials. Previous reading of lab guide. Lab report.	1,5	
8	**Laboratory Session P2.** Characterization of Photodetectors (II)		X		Revision of previous class materials. Previous reading of lab guide. Lab report.	1,5	
9	**I: Receivers in Photonic Systems** Noise in Optical Receivers (I)	X			Previous reading and revision of class materials	1,5	
10	**I: Receivers in Photonic Systems** Noise in Optical Receivers (II)	X			Previous reading and revision of class materials and proposed exercises	1,5	15
11	**II: Optical Modulation and Multiplexing.** Modulation Techniques (I)	X			Previous reading and revision of class materials	1,5	
12	**II: Optical Modulation and Multiplexing.** Modulation Techniques (II)	X			Previous reading and revision of class materials and proposed exercises	1,5	
13	**II: Optical Modulation and Multiplexing.** Multiplexing Techniques (I)	X			Previous reading and revision of class materials	1,5	
14	**II: Optical Modulation and Multiplexing.** Multiplexing Techniques (I)	X			Previous reading and revision of class materials and proposed exercises	1,5	
15	**Laboratory Session P3.** Characterization of Amplifiers and Conditioning Circuits (I)		X		Revision of previous class materials. Previous reading of lab guide. Lab report	1,5	
16	**Laboratory Session P4.** Characterization of Amplifiers and Conditioning Circuits (II)		X		Revision of previous class materials. Previous reading of lab guide. Lab report	1,5	
17	**III: Current Optical Communications Systems Analysis.** Optical Communications Links and Performance (I)	X			Previous reading and revision of class materials	1,5	
18	**III: Current Optical Communications Systems Analysis.** Optical Communications Links and Performance (II)	X			Previous reading and revision of class materials	1,5	15
19	**III: Current Optical Communications Systems Analysis.** Application Examples (I)	X			Revision of theoretical concepts and proposed exercises	1,5	
20	**III: Current Optical Communications Systems Analysis.** Application Examples (II)	X			Revision of theoretical concepts and proposed exercises	1,5	
21	**IV: Photonic Systems for Sensors Applications (I)**	X			Previous reading and revision of class materials	1,5	
22	**IV: Photonic Systems for Sensors Applications (II)**	X			Previous reading and revision of class materials	1,5	

23	**Laboratory Session P5.** Characterization of Optical Link		X		Revision of previous class materials. Previous reading of lab guide. Lab report.	1,5	15
24	**IV: Photonic Systems for Sensors Applications (III)**	X			Previous reading and revision of class materials	1,5	
25	**IV: Photonic Systems for Sensors Applications (IV)**	X			Previous reading and revision of class materials and proposed exercises	1,5	
26	Signal and Image Processing Techniques to Improve Optical Systems	X			Previous reading and revision of class materials.	1,5	
27	**Exercises**		X		Revision of theoretical concepts and proposed exercises	1,5	8
28	**Exercises**		X		Revision of theoretical concepts and proposed exercises	1,5	
					Subtotal 1	**42**	**68**
					Total 1 *(Hours of class plus student homework hours between weeks 1-14)*	**110**	

	Tutorials, handing in, etc				Solving any remaining question	20	
29	Assessment				Studying the documentation for the final assessment.	3	17
					Subtotal 2	**3**	**37**
					Total 2 *(Hours of class plus student homework hours at week 15)*	**40**	

TOTAL *(Total 1 + Total 2)*	**150**