uc3m | Universidad Carlos III de Madrid

COURSE: Image processing and reconstruction (15551)		
DEGREE: BIOMEDICAL ENGINEERING	**YEAR: 2018/19**	**TERM: 2nd**

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			DATE	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Course presentation. Elements of Visual Perception. Human Visual System.	X					1,6	
1	2	Matlab refreshment		X		X		1,6	7
2	3	Image Sampling and Quantization. Hw1	X					1,6	
2	4	Spatial and gray level resolution. Examples		X				1,6	7
3	5	Geometrical transformations. Hw2	X					1,6	
3	6	Understanding Zooming, Shrinking and Transforming in digital images.		X				1,6	7
4	7	Point processing.	X					1,6	
4	8	Image enhancement. Point processing II.		X				1,6	7
5	9	Color images.	X					1,6	
5	10	Color images II. Image file formats.		X				1,6	7
6	11	Image filtering in spatial domain	X					1,6	
6	12	Exercises on Spatial filtering		X				1,6	7
7	13	Spatial Filtering III	X					1,6	
7	14	Exam exercises		X		X		1,6	7

8	15	**PARTIAL EXAM**	**X**					1,6	
8	16	Mathematical morphology		X				1,6	7
9	17	Segmentation I.	X					1,6	
9	18	Segmentation II. Fourier III		X				1,6	7
10	19	Image filtering in Fourier domain I	X					1,6	
10	20	Fourier II		X		X		1,6	7
11	21	Segmentation III. Group practice description.	X					1,6	
11	22	Exercises on Fourier analysis		X				1,6	7
12	23	Image compression	X					1,6	
12	24	Image compression II		X				1,6	7
13	25	Medical Image Modalities I	X					1,6	
13	26	Medical Image Modalities II		X				1,6	7
14	27	Group practice presentations		X				1,6	
14	28	Tutorial. Exam exercises						1,6	7
14	29	Tutorial. Exam exercises						1,6	
							Subtotal 1	**46,4**	**98**
							Total 1 *(Hours of class plus student homework hours between weeks 1-14)*	144,4	

15		Tutorials, handing in, etc						2	
16		Assessment						3	8
17									
18									
							Subtotal 2	**5**	**8**
							Total 2 *(Hours of class plus student homework hours between weeks 15-18)*	13	

TOTAL A *(Total 1 + Total 2)*	**155,8**

LABORATORIES CLASSES PROGRAMMING (*)						
WEEK	SESSION	DESCRIPTION	LABORATORY	WEEKLY PROGRAMMING FOR STUDENT		
				DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
	1	Matlab seminar			1,6	2
	2	Homework 1			1,6	2
	3	Homework 2			1,6	2
	4	Homework 3			1,6	2
	5	Homework 4			1,6	2
	6	Group practice			1,6	4
				Subtotal 3	**9,6**	**14**
				Total 3 *(Hours of class plus student homework hours of ten sessions laboratories)*	**23,6**	
				TOTAL B *(Total 3)*	**23,6**	
TOTAL *(Total A + Total B. Maximum 180 hours)*					**179.4**	

(*) *In EPS are given an additional 16 hours of laboratory practices along ten sessions.*