

COURSE: Medical Image processing (14158)

DEGREE: BIOMEDICAL ENGINEERING

YEAR: 2020/21

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		
			ONLINE LECTURES	SEMINARS			DATE	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
1	1	Course presentation. Visual Perception.		X			4,5 Feb	1,6	7
1	2	Matlab refreshment.	X		Online Lab	X	10 Feb	1,6	
2	3	Image Sampling and Quantization.		X			11,12 feb	1,6	7
2	4	Spatial and gray level resolution. Examples	X				17 Feb	1,6	
3	5	Geometrical transformations.		X			18,19 feb	1,6	7
3	6	Understanding Zooming, Shrinking and Transforming in digital images.	X				24 Feb	1,6	
4	7	Image enhancement. Point processing I		X			25,26 feb	1,6	7
4	8	Image enhancement. Point processing II.	X				3 Mar	1,6	
5	9	Color images.		X			4,5 mar	1,6	7
5	10	Color images II. Image file formats.	X		Online Lab	X	10 Mar	1,6	
6	11	Image filtering in spatial domain		X			11,12 mar	1,6	7
6	12	Exercises on Spatial filtering	X		Online Lab	X	17 Mar	1,6	

7	13	No lectures this week					<i>CANCEL</i>		
7	14	Medical Imaging Modalities I	X				<i>24 Mar</i>	1,6	7
8	15	Exam Exercises		X		X	<i>25,26 Mar</i>	1,6	
8	16	PARTIAL EXAM. Online	X			X	<i>7 Apr</i>	1,6	7
9	17	Fourier domain		X			<i>8,9 Apr</i>	1,6	
9	18	Image filtering in the Fourier domain I.	X		Online lab	X	<i>14 Apr</i>	1,6	
10	19	Image filtering in the Fourier domain II		X			<i>15,16 Apr</i>	1,6	7
10	20	Medical Imaging Modalities II	X				<i>21 Apr</i>	1,6	
11	21	Image segmentation I		X			<i>22,23 Apr</i>	1,6	7
11	22	Image segmentation II. Exercises	X		Online Lab		<i>28 Apr</i>	1,6	
12	23	Exercises on image segmentation		X			<i>29,30 Apr</i>	1,6	7
12	24	Image compression	X				<i>5 May</i>	1,6	
13	25	Exercises on image compression		X			<i>6,7 May</i>	1,6	7
13	26	Advanced methods for image processing	X				<i>12 May</i>	1,6	
13	27	Group practice presentations		X			<i>13 May</i>	1,6	
14	28	Group practice presentations		X			<i>14 May</i>	1,6	7
14	29	Tutorial. Exam exercises	X				<i>19 May</i>	1,6	
<b>Subtotal 1</b>								<b>46,4</b>	<b>98</b>
<b>Total 1 (Hours of class plus student homework hours between weeks 1-14)</b>								<b>144,4</b>	

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

<b>TOTAL A</b> (Total 1 + Total 2)	<b>155,8</b>
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<b>LABORATORIES CLASSES PROGRAMMING (*)</b>						
WEEK	SESSION	DESCRIPTION	LABORATORY	WEEKLY PROGRAMMING FOR STUDENT		
				DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)
	1	Matlab seminar			1,6	2
	2	Color image processing seminar			1,6	2
	3	Spatial filtering			1,6	2
	4	Fourier analysis			1,6	2
	5	Image segmentation			1,6	2
	6	Group practice on image quantification			1,6	3
				<b>Subtotal 3</b>	<b>10</b>	<b>13</b>
				<b>Total 3</b> (Hours of class plus student homework hours of ten sessions laboratories)	<b>23</b>	
				<b>TOTAL B</b> (Total 3)	<b>23</b>	
				<b>TOTAL</b> (Total A + Total B. <u>Maximum 180 hours</u> )	<b>167.4</b>	

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