



<b>COURSE: Advanced Topics in Medical Imaging (15562)</b>		
<b>DEGREE: BIOMEDICAL ENGINEERING</b>	<b>YEAR: 2017/18</b>	<b>TERM: 2nd</b>

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	Review of basic concepts learnt on image processing					Jan 26	1,6	7
1	2	Image processing with ImageJ			1.0.G14		Jan 30	1,6	
2	3	DICOM information model and functionality					Feb 2	1,6	7
2	4	Practical session: DICOM network services.			1.0.G14		Feb 6	1,6	
3	5	3D Visualization					Feb 9	1,6	7
3	6	DICOM: homework correction. RIS/PACS					Feb 13	1,6	
4	7	Practical session: 3D Visualization			1.0.G14		Feb 16	1,6	7
4	8	Wavelets					Feb 20	1,6	
5	9	Practical session: wavelets			1.0.G14		Feb 23	1,6	7

5	10	Advanced segmentation I: Hough transform and Canny filter					Feb 27	1,6	
6	11	Practical session on advanced segmentation I					Mar 2	1,6	7
6	12	Feature-based registration					Mar 6	1,6	
7	13	Intensity Based registration.			1.0.G14		Mar 9	1,6	7
7	14	Advanced segmentation II: Adaptive filters					Mar 13	1,6	
8	15	Practical session advanced segmentation II			1.0.G14		Mar 16	1,6	7
8	16	Practical session image registration			1.0.G14		Mar 20	1,6	
9	17	Homework correction and exam questions					Mar 23	1,6	7
9	18	Image reconstruction I					Apr 3	1,6	
10	19	Image reconstruction II					Apr 6	1,6	7
10	20	Image reconstruction III					Apr 10	1,6	
11	21	Image reconstruction IV					Apr 13	1,6	7
11	22	Feature extraction and statistical classification I					Apr 17	1,6	
12	23	Jornadas empleo en ingeniería biomédica					Apr 20	1,6	7
12	24	Feature extraction and statistical classification II					Apr 24	1,6	
13	25	Practical session on classification			1.0.G14		Apr 27	1,6	7
13	26	Exam questions: extra class TBD					May 1	1,6	
14	27	Beyond classical methods					May 4		4,34
14	28	Snakes and Active contours					May 8		
<b>Subtotal 1</b>								<b>41,66</b>	<b>95,34</b>
<b>Total 1 (Hours of class plus student homework hours between weeks 1-14)</b>								<b>137</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>150</b>
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<b>LABORATORIES CLASSES PROGRAMMING (*)</b>						
<b>WEEK</b>	<b>SESSION</b>	<b>DESCRIPTION</b>	<b>LABORATORY</b>	<b>WEEKLY PROGRAMMING FOR STUDENT</b>		
				<b>DESCRIPTION</b>	<b>CLASS HOURS</b>	<b>HOMEWORK HOURS (Max. 7h week)</b>
	1	Image processing with ImageJ	1.0.G14		1,6	1
	2	DICOM Network services	1.0.G14		1,6	1
	3	Wavelets	1.0.G14		1,6	1
	4	Advanced segmentation	1.0.G14		1,6	1
	5	Image registration	1.0.G14		1,6	1
	6	Adaptive filters	1.0.G14		1,6	1
	7	Statistical classification	1.0.G14		1,6	1
	8	Image reconstruction			1,6	1
	9	Syngo academy	External activity		1,6	1
	10	3D representation	1.0.G14		1,6	1
<b>Subtotal 3</b>					<b>16</b>	<b>10</b>
<b>Total 3</b> (Hours of class plus student homework hours of ten sessions laboratories)					<b>26</b>	

<b>TOTAL B</b> (Total 3)	<b>26</b>
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<b>TOTAL</b> (Total A + Total B. <u>Maximum 180 hours</u> )	<b>176</b>
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(\*) In EPS are given an additional 16 hours of laboratory practices along ten sessions.