



<b>COURSE: Introduction to Biomaterials</b>		
<b>DEGREE: Biomedical Engineering</b>	<b>YEAR: 2019/2020</b>	<b>TERM: 2</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 W 29 Jan	1	Introduction to Biomaterials. Basic concepts	X				Reading of proposed topics. Bibliographic research	1.6	6
1 Th 30/Fr 31 Jan	2	Polymers for biomedical applications	X				Reading of proposed topics. Bibliographic research	1.6	
2 W 05 Feb	3	Hydrogels for biomedical applications	X				Reading of proposed topics. Bibliographic research	1.6	6
2 Th 06/Fr 07 Feb	4	Presentation and discussion of some practical examples, problems and articles		X				1.6	
3 W 12 Feb	5	Bioceramics	X				Reading of proposed topics. Bibliographic research	1.6	6
3 Th 13/Fr 14 Feb	6	Presentation and discussion of some practical examples, problems and articles		X				1.6	
4	7	Surface modification of biomaterials	X				Reading of proposed topics.	1.6	6

<b>W 19 Feb</b>							Bibliographic research		
4 <b>Th 20/Fr 21 Feb</b>	8	Presentation and discussion of some practical examples, problems and articles		X				1.6	
5 <b>W 26 Feb</b>	9	Designing biomaterials for 3D printing	X				Reading of proposed topics. Bibliographic research	1.6	6
5 <b>Th 27/Fr 28 Feb</b>	10	Practical demonstration of 3D printing		X				1.6	
6 <b>W 04 Mar</b>	11	<b>CONTINUOUS EVALUATION: TEST</b>						1.6	6
6 <b>Th 05/Fr 06 Mar</b>	12	Presentation and discussion of some practical examples, problems and articles		X				1.6	
7 <b>W 11 Mar</b>	13	Biomaterial degradation I	X				Reading of proposed topics. Bibliographic research	1.6	6
7 <b>Th 12/Fr 13 Mar</b>	14	Biomaterial degradation II	X				Reading of proposed topics. Bibliographic research	1.6	
8 <b>W 18 Mar</b>	15	Extracellular matrix-based biomaterials	X				Reading of proposed topics. Bibliographic research	1.6	6
8 <b>Th 19/Fr 20 Mar</b>	16	Extracellular matrix-based biomaterials: activity		X	X			1.6	
9 <b>W 25 Mar</b>	17	Presentation and discussion of some practical examples, problems and articles		X				1.6	6
9 <b>Th 26/Fr 27 Mar</b>	18	Wound healing and the presence of biomaterials	X				Reading of proposed topics. Bibliographic research	1.6	
10 <b>W 01 Apr</b>	19	Presentation and discussion of some practical examples, problems and articles		X				1.6	6
10 <b>Th 02/Fr 03 Apr</b>	20	Immune response to biomaterials. Tumorigenesis and calcification of biomaterials	X				Reading of proposed topics. Bibliographic research	1.6	
11 <b>W 15 Apr</b>	21	<b>CONTINUOUS EVALUATION: TEST</b>						1.6	6
11 <b>Th 16</b>	22	Biofilms. Approaches to control/prevent biomaterial-related biofilm infections	X				Reading of proposed topics. Bibliographic research	1.6	
11 <b>Fr 17 Apr</b>		<b>NO CLASS</b> (Jornada de Empleo de Ingeniería Biomédica )							
12 <b>W 22 Apr</b>	23	Blood-biomaterial interactions	X				Reading of proposed topics. Bibliographic research	1.6	6
12 <b>Th 23/Fr 24 Apr</b>	24	Presentation and discussion of some practical examples, problems and articles		X				1.6	

13 W 29 Apr	25	Scientific paper presentation by students		X				1.6	6
13 Th 30 Apr	26	Scientific paper presentation by students		X				1.6	
14 W 06 May	27	Scientific paper presentation by students		X				1.6	6
15 Th 07 May	28	Scientific paper presentation by students		X				1.6	

**Subtotal 1**

**44.8**

**84**

**Total 1** (Hours of class plus student homework hours between weeks 1-14)

**128.8**

15		Tutorials, handing in, etc						1.5	
16		Assessment						3	6
17									
18									

**Subtotal 2**

**4.5**

**6**

**Total 2** (Hours of class plus student homework hours between weeks 15-18)

**10.5**

<b>TOTAL</b> (Total 1 + Total 2)								<b>139.3</b>
----------------------------------	--	--	--	--	--	--	--	--------------