



58h total  
de clases  
(teóricas  
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<b>COURSE:</b> CELL CULTURE FOR TISSUE ENGINEERING AND BIOTECHNOLOGY		
<b>DEGREE:</b> Biomedical Engineering	<b>YEAR:</b> 2016	<b>TERM:</b> 1

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)
06/09/2017	1	<b>Introduction: Overview and Objectives</b>	X				Formal Class	1,6	6
06/09/2017	2	<b>Critical discussion of papers (Uygun et al., Nature Medicine 2010)</b>		X			Formal Class	1,6	
13/09/2017	3	<b>Tissue/Organ Engineering Paradigm</b>	X				Formal Class	1,6	6
13/09/2017	4	<b>Concepts of Embryogenesis and Morphogenesis</b>	X				Formal Class	1,6	
20/09/2017	5	<b>Enabling Technologies – Bioreactors</b>	X				Formal Class	1,6	6

20/09/2017	6	<b>Technologies - Use of Recombinant Technologies in TE</b>	X				Formal Class	1,6	
27/09/2017	7	<b>Organ Reconstruction (Implantation, Transplantation &amp; Rejection)</b>	X				Formal Class	1,6	6
27/09/2017	8	<b>Organ Reconstruction II (Implantation, Transplantation &amp; Rejection)</b>	X				Formal Class	1,6	
04/10/2017	9	<b>First Continuous Evaluation Test (40 min)</b>	X				Test	0,8	6
04/10/2017	10	<b>Organ Reconstruction I (Bioartificial Organs and Bioengineering) (1,5h)</b>	X				Formal Class	1,6	
18/10/2017	11	<b>Organ Reconstruction II (Bioartificial Organs and Bioengineering) (1,5h)</b>	X				Formal Class	1,6	6
18/10/2017	12	<b>Transgenics as Biofactories (Shaïda Mogadassi) (1,5h)</b>	X				Invited lecturer (Shaïda Mogadassi)	1,6	
25/10/2017	14	<b>Gene Therapy (Jose Carlos Segovia) (1,5h)</b>	X				Invited lecturer (Jose Carlos Segovia)	1,6	6
25/10/2017	15	<b>Experimental and Bioengineering Research (Introduction) (2h)</b>	X				Formal Class	2	
08/11/2017	16	<b>Experimental and Bioengineering research I (Stem Cell Harvesting and Isolation) (2h)</b>		X			UC3M Bioengineering Labs	2	
08/11/2017	17	<b>Experimental and Bioengineering research III (Stem Cell Culture and Expansion) (2h)</b>		X			UC3M Bioengineering Labs	2	6
15/11/2017	18	<b>Experimental and Bioengineering research II (Scaffold Generation) (4h)</b>		X			UC3M Bioengineering Labs	4	
22/11/2017	19	<b>Experimental and Bioengineering research IV (Tissue/Organ Bioengineering) (4h)</b>		X			UC3M Bioengineering Labs	4	6
29/11/2017	20	<b>Second Continuous Evaluation Test (40 min)</b>	X				Test	0,8	
29/11/2017	21	<b>Experimental and Bioengineering research V (Tissue Construct Analysis) (2h)</b>	X				Formal Class	2	6
27/11/2017-13/12/2017	22	<b>Experimental and Bioengineering research VI (RT-PCR) (10h)</b>		X			UC3M Bioengineering Labs	10	6
13/12/2017	23	<b>Advance therapy medicinal product: From the bench to the patient (1h30)</b>	X				Invited lecturer (Maruja Lamana)	1,6	3
13/12/2017	24	<b>Government regulations for engineered tissues (1h30)</b>	X				Invited lecturer (Sol Ruiz)	1,6	3
<b>Subtotal 1</b>								<b>24</b>	<b>45</b>
<b>Total 1 (Hours of class plus student homework hours between weeks 1-14)</b>								<b>69</b>	

20/12/2017		<b>Paper presentation</b>						4	7
<b>Subtotal 2</b>								<b>4</b>	<b>7</b>
<b>Total 2 (Hours of class plus student homework hours between weeks 15-18)</b>								<b>11</b>	
<b>TOTAL A (Total 1 + Total 2)</b>								<b>80</b>	

<b>LABORATORIES CLASSES PROGRAMMING (*)</b>							
WEEK	SESSION	DESCRIPTION	LABORATORY	WEEKLY PROGRAMMING FOR STUDENT			
				DESCRIPTION	CLASS HOURS	HOMEWORK HOURS (Max. 7h week)	
8/11/2017	1	Stem Cell Harvesting, Isolation and Cell Culture Expansion	UC3M Bioengineering Labs	Teams of 10 students	4	1	
15/11/2017	3	Scaffold Generation	UC3M Bioengineering Labs	Teams of 10 students	4	1	
22/11/2017	4	Tissue/Organ Bioengineering	UC3M Bioengineering Labs	Teams of 10 students	4	1	
29/11/2017	5	Tissue Construct Analysis	UC3M Bioengineering Labs	Teams of 10 students	2	1	
27/11/2016-15/12/2016	6	Biomolecular characterization of tissues I (RT-PCR)	UC3M Bioengineering Labs	Teams of 10 students	10	1	
20/12/2016	7	<b>Paper presentation</b>	UC3M Bioengineering Labs	Teams of 10 students	2	1	
1					<b>Subtotal 3</b>	<b>26</b>	<b>7</b>
<b>Total 3 (Hours of class plus student homework hours of ten sessions laboratories)</b>						<b>33</b>	
<b>TOTAL B (Total 3)</b>						<b>33</b>	

<b>TOTAL (Total A + Total B. Maximum 180 hours)</b>	<b>113</b>
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(\*) In EPS are given an additional 16 hours of laboratory practices along ten sessions.