STEM CELL BIOLOGY											
1	Course Title:	STEM C	ELL BIOLOGY								
2	Course Code:	MBG411	9								
3	Type of Course:	Optional									
4	Level of Course:	First Cyc	le								
5	Year of Study:	4									
6	Semester:	7									
7	ECTS Credits Allocated:	6.00									
8	Theoretical (hour/week):	3.00									
9	Practice (hour/week):	0.00									
10	Laboratory (hour/week):	0									
11	Prerequisites:										
12	Language:	Turkish									
13	Mode of Delivery:	Face to f	ace								
14	Course Coordinator:	Dr. Ögr.	Üyesi BURCU ERBAYKENT TEPEDELEN								
15	Course Lecturers:										
16	Contact information of the Course Coordinator:	Dr. Ögr. e-posta: 0 224 29 Fen-Ede Bölümü,	Üyesi Burcu ERBAYKENT TEPEDELEN berbaykent@uludag.edu.tr 9 42847 biyat Fakültesi, Moleküler Biyoloji ve Genetik Görükle Kampüsü, 16059 Bursa								
17	Website:										
18	Objective of the Course:	The aim of this course is to examine the definition of stem cells, the use of stem cells in therapy and their application areas.									
19	Contribution of the Course to Professional Development:	Providing the necessary theoretical knowledge for internship and work in research laboratories and companies working on stem cells,									
20	Learning Outcomes:										
		1	Knowledge about the definition of stem cells								
		2	To know the biology of stem cells								
		3	Understanding stem cell types								
		4	Knowledge about cancer stem cells								
		5	Understanding stem cell differentiation								
		6	Knowledge about stem cell therapies for different diseases								
		7									
		8									
		9									
		10									
21	Course Content:										
		Co	urse Content:								
Week	Theoretical		Practice								
1	Introduction and stem cell definitions	;									
2	Stem cell types										
3	Embryonic stem cells										
4	Adult stem cells										
5	Hematopoietic stem cells										

6	Mesenchymal stem cells																			
7	Induced pluripotent stem cells																			
8	Can	Cancer stem cells																		
9	Gene regulation in stem cell differentiation: Wnt signaling pathway																			
10	Gen Hed	e reg geho	gulatio g sigr	n in st naling	em ce pathw	ell diffei ay	rentia	tion:												
11	Dete	ectior	n and	imagir	ng of s	stem ce	lls													
12	Clini	cal u	se of	stem o	cells															
13	Clini	cal u	se of	stem o	cells															
14	Clinical use of stem cells																			
22	Textbooks, References and/or Other Materials:								1. Ce	1. Song Li, Nicolas L'Heureux, Jennifer Elisseeff, "Stem Cell and Tissue Engineering", World Scientific, 2011.										
									Z. Os (Ec Ap	2. Nadja M. Bilko (Editor), Boris Fehse (Editor), Wolfram Ostertag (Editor), Carol Stocking (Editor), Axel R. Zander (Editor), "Stem Cells and Their Potential for Clinical Application" (NATO Science for Peace and Security Series										
23	Assesment									A. Ghemistry and biology) Springer, Netherlands, 2007.										
TERML	TERM LEARNING ACTIVITIES								E WE	WEIGHT										
Midterm Exam 1							40	40.00												
Activites								Ĩ	Numb	ber		Dura	tion (Total Work Load (hour)						
Theore	Fheoretical 2									b400			3.00	3.00 42.00						
Practic	Practicals/Labs)			0.00			0.00				
Selfst										14			6.00	6.00			84.00			
Homew	omeworks									3			9.00	9.00			27.00			
₽¢¢¢ ect	ntate cts									0.00			0.00	0.00			0.00			
Field S	eld Studies									0				0.00						
MOULTER	diferm exams									1					10.00					
Others	thers									0					0.00					
Final E	al Exams									1					10.00					
Total V	al Work Load													183.00						
Total w	otal work load/ 30 hr									5.77						_				
ECTS	CTS Credit of the Course									6.00										
25																				
	QUALIFICATIONS																			
		PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16			
ÖK1	ť	5	0	3	0	4	1	0	4	4	4	0	0	0	0	0	0			
ÖK2	ť	5	0	3	0	4	1	0	4	4	4	0	0	0	0	0	0			
ÖK3	ť	5	0	3	0	4	1	0	4	4	4	0	0	0	0	0	0			
ÖK4	ť	5 0 3 0 4 1 0 4							4	4	4	0	0	0	0	0	0			

ÖK5	5	0	3	0	4	1	0	4	4	4	0	0	0	0	0	0
ÖK6	5	0	3	0	4	1	0	4	4	4	0	0	0	0	0	0
LO: Learning Objectives PQ: Program Qualifications																
Contrib 1 very low ution Level:				2 low			3 Medium			4 High			5 Very High			