	STE	М СЕ	LL BIOLOGY							
1	Course Title:	STEM C	ELL BIOLOGY							
2	Course Code:	BIO5208	3							
3	Type of Course:	Optional								
4	Level of Course:	Second	Cycle							
5	Year of Study:	1								
6	Semester:	2								
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:	Students	s should have basic knowledge of the cellular biology.							
12	Language:	Turkish								
13	Mode of Delivery:	Face to	face							
14	Course Coordinator:	Prof. Dr.	Tolga Çavaş							
15	Course Lecturers:									
16	Contact information of the Course Coordinator:									
17	Website:									
18	Objective of the Course:	Stem cells are found in most, if not all, multi-cellular organisms and differentiating into a diverse range of specialized cell types. They are characterized by the ability to renew themselves through mitoticell division The aim of this course is to provide the students knowledge of stem cell biology and recent applications of stem cells, at graduate level.								
19	Contribution of the Course to Professional Development:									
20	Learning Outcomes:									
		1	To gain information about advanced cellular biology.							
		2	To appreciate how cell and organ culture is used experimentally for stem cell and tissue engineering research.							
		3	To understand how stem cells from embryonic and mature organisms are identified.							
		4	To learn about how stem cells are currently being used in the clinics							
		5	To be informed about the aspects of stem cell behaviour							
		6	To understand ethical issues regarding the stem cell research.							
		7								
		8								
		9								
04	Course Content	10								
21	Course Content:	^-	ource Centents							
W/ook	Theoretical	Co	Practice							
1	Introduction to stem cell biology		1 TACHICE							
2	Potency									
7	I otelicy									

3	Stem cell niches									
4	Embryonic stem cells									
5	Adult stem cells									
6	Tissue and organ development									
7	Characterisation of stem cells									
8	Genomic repogramming of stem cells	S								
9	Microarray analysis of stem cells									
10	Hematopoetic stem cells									
11	Cord blood stem cells									
12	Cancer stem cells									
13	Stem cell therapy									
14	Ethical conciderations									
22	Textbooks, References and/or Other Materials:		1. R. Lanza, J. Gearhart, B. Hogan, D. Melton, R. Pederson, E.D. Thomas, J.Thomson, I. Wilmut. Essentials of Stem Cell Biology. Academic Press.							
23	Assesment	,								
TERM L	EARNING ACTIVITIES	NUMBE R	WEIGHT							
Midtern	n Exam	1	30.00							
Quiz		0	0.00							
	work-project	1	Number Duration (hour) Total Work							
Activit	es		Number	Duration (nour)	Load (hour)					
Enetrib	Htian of Term (Year) Learning Activition	es to	501020	3.00	42.00					
	als/Labs		0	0.00	0.00					
Self stu	idilon or Final Exam to Success Grade idy and preperation	J	30,00	20.00	80.00					
Homew			1	80.00	80.00					
Megely	gement and Evaluation Techniques Us	sed in the	0	0.00	0.00					
Field S			0	0.00						
Midtern	n exams		1	18.00						
Others			0 0.00 0.00							
Final E	xams		1 20.00 20.00							
Total W	/ork Load			240.00						
Total w	ork load/ 30 hr				8.00					
ECTS (Credit of the Course				6.00					
25	CONTRIBUTION (Q	UALIFICATIONS							

25	CONTRIBUTION OF LEARNING OUTCOMES TO PROGRAMME QUALIFICATIONS															
	PQ1	PQ2	PQ3	PQ4	PQ5	PQ6	PQ7	PQ8	PQ9	PQ1 0	PQ11	PQ12	PQ1 3	PQ14	PQ15	PQ16
ÖK1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK2	0	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0
ÖK3	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0
ÖK4	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0

ÖK5	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ÖK6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0												0				
Contrib 1 very low 2 low 3 Medium 4 High 5 Very High Level:											y High					