



## AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Mesenchymal Stem Cell and Clinical Usage							
Course Code		KHÜ530		Course Level		Second Cycle (Master's Degree)			
ECTS Credit	8	Workload	196 ( <i>Hours</i> )	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		To understand mesenchymal stem cell and its clinical importance							
Course Content		Mesenchymal stem cell biology and basic concepts, use of mesenchymal stem cells in regenerative medicine							
Work Placement		N/A							
Planned Learning Activities and Teaching Methods				Explanation (Presentation), Discussion, Individual Study					
Name of Lecturer(s)									

### Assessment Methods and Criteria

Method	Quantity	Percentage (%)
Midterm Examination	1	20
Final Examination	1	60
Assignment	1	20

### Recommended or Required Reading

1	Teoman soysal . Kök hücre ve biyolojisi ve uygulama alanları (2014) Hematolog Türk Hematoloji derneği yayını
2	Greer J, Arber D, Glader B, List A, Menas R, Paraskevas F, Rogres G. Wintrob's Clinical Hematology, Lippincott, 2014.

Week	Weekly Detailed Course Contents	
1	Theoretical	Definition of mesenchymal stem cells
2	Theoretical	Basic concepts in mesenchymal stem cells
3	Theoretical	Mesenchymal stem cell derived from bone marrow
4	Theoretical	Blood-derived mesenchymal stem cell
5	Theoretical	Mesenchymal stem cells derived from adipose tissue
6	Theoretical	Mesenchymal stem cells from cord blood
7	Theoretical	Immunophenotyping in mesenchymal stem cells
8	Intermediate Exam	Mid-term exam
9	Theoretical	Differentiation in mesenchymal stem cells-I
10	Theoretical	Differentiation in mesenchymal stem cells-II
11	Theoretical	Environmental factors in mesenchymal stem cells
12	Theoretical	Use of mesenchymal stem cells in regenerative medicine-I
13	Theoretical	Use of mesenchymal stem cells in regenerative medicine-II
14	Theoretical	Mesenchymal stem cell aging
15	Final Exam	Final exam

### Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	13	1	3	52
Assignment	4	15	2	68
Midterm Examination	1	24	2	26
Final Examination	1	48	2	50
Total Workload (Hours)				196
[Total Workload (Hours) / 25*] = ECTS				8

\*25 hour workload is accepted as 1 ECTS

### Learning Outcomes

1	Identify mesenchymal stem cells
2	To know the basic concepts of mesenchymal stem cells



3	To understand the clinical use of mesenchymal stem cells
4	Describe its role in regenerative medicine and immunomodulation
5	To understand the use of mesenchymal stem cells in regenerative medicine

**Programme Outcomes (Stem Cell and Regenerative Medicine Interdisciplinary Master)**

1	To have comprehensive and in-depth knowledge of Stem Cell and Regenerative Medicine
2	To have information about stem cell production and characterization
3	To learn stem cell sources, stem cell types and their differences
4	To understand the molecular and genetic structure of stem cells
5	To be able to learn and make stem cell culture methods
6	To be able to adapt the knowledge in the field of stem cells to research in line with current developments
7	To be able to use molecular laboratory methods used in stem cell research
8	Learning in vitro disease models and in vivo experiments related to stem cells
9	To have knowledge about stem cell therapies and clinical use
10	Conduct independent research in accordance with the principles of research and publication ethics

**Contribution of Learning Outcomes to Programme Outcomes 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High**

	L1	L2	L3	L4	L5
P1	4	4	5	5	5
P2	5	4	4	4	4
P3	4	4	4	4	4
P6	3	3	3	3	3
P9	4	4	5	5	5

