



AYDIN ADNAN MENDERES UNIVERSITY COURSE INFORMATION FORM

Course Title		Advanced Muscle Physiology							
Course Code		TFZ610		Couse Level		Third Cycle (Doctorate Degree)			
ECTS Credit	6	Workload	156 (<i>Hours</i>)	Theory	2	Practice	2	Laboratory	0
Objectives of the Course		Introduce knowledge skills about muscle physiology. Present novel scientific data to participants.							
Course Content		Membrane potentials; Action potentials; Excitation and rhythmicity; Contraction of skeletal muscle; Physiologic anatomy of skeletal muscle; Molecular mechanism of muscle contraction; Initiation of muscle contraction; Energy source in muscle contraction; Characteristics of one contraction of muscle; Work of skeletal muscles in body; Special situations of function of skeletal muscle and some disorders; Neuromuscular transition; Function of smooth muscles; Smooth muscles and their contractions; Neuromuscular junctions on smooth muscles.							
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	40
Final Examination	1	60

Recommended or Required Reading

1	Guyton, Medical Physiology
2	All scientific data about the subject

Week	Weekly Detailed Course Contents	
1	Theoretical	Membrane potentials
	Practice	Membrane potentials practice
	Preparation Work	Reading
2	Theoretical	Action potentials
	Practice	Action potentials practice
	Preparation Work	Reading
3	Theoretical	Excitation and rhythmicity; Contraction of skeletal muscle
	Practice	Excitation and rhythmicity; Contraction of skeletal muscle practice
	Preparation Work	Reading
4	Theoretical	Physiologic anatomy of skeletal muscle
	Practice	Physiologic anatomy of skeletal muscle practice
	Preparation Work	Reading
5	Theoretical	Molecular mechanism of muscle contraction
	Practice	Molecular mechanism of muscle contraction practice
	Preparation Work	Reading
6	Theoretical	Initiation of muscle contraction
	Practice	Initiation of muscle contraction practice
	Preparation Work	Reading
7	Intermediate Exam	Midterm exam
8	Theoretical	Characteristics of one contraction of muscle
	Practice	Characteristics of one contraction of muscle practice
	Preparation Work	Reading
9	Theoretical	Work of skeletal muscles in body



9	Practice	Work of skeletal muscles in body practice
	Preparation Work	Reading
10	Theoretical	Special situations of function of skeletal muscle and some disorders
	Practice	Special situations of function of skeletal muscle and some disorders practice
	Preparation Work	Reading
11	Theoretical	Neuromuscular transition
	Practice	Neuromuscular transition practice
	Preparation Work	Reading
12	Theoretical	Function of smooth muscles
	Practice	Function of smooth muscles practice
	Preparation Work	Reading
13	Theoretical	Smooth muscles and their contractions
	Practice	Smooth muscles and their contractions practice
	Preparation Work	Reading
14	Final Exam	Final exam

Workload Calculation

Activity	Quantity	Preparation	Duration	Total Workload
Lecture - Theory	14	1	2	42
Lecture - Practice	14	1	2	42
Assignment	10	6	1	70
Midterm Examination	1	0	1	1
Final Examination	1	0	1	1
Total Workload (Hours)				156
[Total Workload (Hours) / 25*] = ECTS				6

*25 hour workload is accepted as 1 ECTS

Learning Outcomes

1	To be able to recognize the importance of Advanced Muscle physiology
2	To be able to evaluate the relationship between other systems
3	To be able to investigate physiopathological symptoms about the subject
4	Interpret general principals about the subject
5	

Programme Outcomes (Physiology (Medical) Doctorate)

1	Has a deep and broad knowledge about the field and the interdisciplinary area related with the field through the achievements gained in undergraduate and professional levels.
2	Has the knowledge to create original ideas, analyze them and develop definition/product/diagnosis methods by using the knowledge gained in undergraduate and/or professional experience, when needed.
3	To learn the laws and regulations both national and international in the field of physiology.
4	To gain ability to apply the principles and fundamentals of scientific ethical rules.
5	Implements and defends institutional and practical information and abilities in accordance with the needs of the country and the world, and changes when necessary.

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	5	5	3	5	4
P2	5	5	4	5	4
P3	4	4	4	4	5
P4	4	4	4	4	5
P5	4	3	5	4	5

