

MARMARA UNIVERSITY – EASTERN MEDITERRANEAN UNIVERSITY INTERNATIONAL MEDICAL SCHOOL





MUSCULOSKELETAL, INTEGUMENTARY SYSTEMS AND RELATED DISORDERS YEAR 2 COURSE 4

February 14th, 2020 - April 24th, 2020

Year 2 Coordinators

Assoc. Prof., Özgür Kasımay ÇAKIR & Assist. Prof., Burak AKSU & Assist. Prof., Masoud AFSHANI

Module Coordinators	Introduction to Clinician Skills (ICS) Coordinators	
Assoc. Prof., Özlem SARIKAYA & Inst. Duygu GENÇALP	Prof., Pemra ÜNALAN & Assoc. Prof., Nilüfer GÜZOĞLU	
Coordinators of Clinical Skill Lab.	Coordinators of ICS Res. Lab.	
A ssoc. Prof., Pemra ÜNALAN & Assist. Prof., Bülent SEZGİN	Prof., Pemra ÜNALAN & Inst. Özge CUMAOĞULLA EKER	
Coordinators of Multidiciplinary Students' Lab. Cooordinators of Assessment Unite		
Assoc. Prof., Betül KARADEMİR & Assist. Prof., Mümtaz GÜRAN	Asisst. Prof., Cevdet NACAR & Assist. Prof., H. Eren SAKALLI	
Vice-Chief Coordinators		

Assessment Assisst. Prof., Cevdet NACAR & Assist. Prof., H. Eren SAKALLI Chief Coordinators Assoc. Prof. Hasan YANANII & Assist. Prof. Mümtaz Chief Commission Coordinator of Medical Education Program Evaluation and Development Commission

Assoc. Prof., Hasan YANANLI & Assist. Prof., Mümtaz

GÜRAN

Evaluation and Development Co

Prof., Berrak Ç. YEĞEN

Educational Consultant

Assoc. Prof., Mehmet Ali GÜLPINAR

Dean (EMU)	Dean (MU)
Assoc. Prof., Emre HAMURTEKIN	Prof., Hakan GÜNDÜZ

LEARNING OUTCOMES / COMPETENCIES

A. Clinical Care: Qualified patient care and community oriented health care

- 1. Basic clinical skills
- 2. The organization and management of the patient and the patient care
- 3. The organization and the management of health care delivery services / system
- 4. Health promotion and disease prevention

B. Medical Knowledge and Evidence-Based Medicine

- 5. Appropriate information retrieval and management skills
- 6. The integration of knowledge, critical thinking and evidence-based decision making
- 7. Scientific methods and basic research skills

C. Professional Attitudes and Values

- 8. Communication skills and effective communication with patients / patient relatives
- 9. Interpersonal relationships and team working
- 10. Ethical and professional values, responsibilities
- 11. Individual, social and cultural values and responsibilities
- **12.** Reflective practice and continuing development
- 13. Healthcare delivery systems, management and community oriented health care
- 14. Education and counseling

PHASE-1 LEARNING OBJECTIVES

- 1. Understanding the normal structures and functions of human body
- 2. Correlating the basic concepts and principles to each other that define health and disease; applying basic concepts and principles to health and disease conditions
- 3. Developing clinical problem solving, clinical reasoning and evaluation skills by integrating biomedical, clinical, social and humanities knowledge
- 4. Gaining basic clinical skills by applications in simulated settings.
- 5. Awareness of the professional values in health and disease processes (professional, individual, societal) and acquisition necessary related skills
- 6. Evaluating critically and synthesizing all the medical evidence and perform respecting scientific, professional and ethical values
- 7. Acquisition skills in reflective thinking and practicing, being open to continuous individual / professional development.

PHASES – 1 THEMA/ORGAN SYSTEM-BASED COURSE PROGRAMS

Year 1, Course 1: Introduction to Cell and Cellular Replication
Year 1, Course 2: Cellular Metabolism and Transport
Year 1, Course 3: Development and Organization of Human Body
Year 1, Course 4: Introduction to Nervous System and Human Behavior
Year 2, Course 1: Cell and Tissue Injury I
Year 2, Course 2: Cell and Tissue Injury II

Year 2, Course 3: Hematopoietic System and Related Disorders

Year 2, Course 4: Musculoskeletal, Integumentary Systems and Related Disorders

Year 2, Course 5: Respiratory System and Related Disorders
Year 3, Course 1: Cardiovascular System and Related Disorders
Year 3, Course 2: Gastrointestinal System, Metabolism and Related Disorders
Year 3, Course 3: Nervous System and Related Disorders
Year 3, Course: Growth, Development, Mental Health and Related Disorders
Year 3, Course 5: Urinary and Reproductive System and Related Disorders

MUSCULOSKELETAL, INTEGUMENTARY SYSTEMS AND RELATED DISORDERS

AIM and LEARNING OBJECTIVES of COURSE

Aim: At the end of this committee, second year students will gain knowledge about the development, structure and physiology of the musculoskeletal system and pathogenesis of the disorders related to this system. They will also gain knowledge about the signs and symptoms of musculoskeletal and integumentary disorders, related risk factors, prevention, diagnosis, principles of treatment and rehabilitation.

Learning Objectives: At the end of this committee, second year students will,

- understand the development of the musculoskeletal and intugumentary system
- identify the structure and function of the musculoskeletal and integumentary system
- define the pathologic processes in the musculoskeletal and intugumentary disordes
- gain knowledge about microorganism that affect the musculoskeletal and intugumentary system and their pathogenesis in infectious process
- gain knowledge about the risk groups, risk factors related to the musculoskeletal and intugumentary disorders and preventive measures
- gain knowledge about the signs and symptoms of these disorders
- gain knowledge about the approach to diagnosis, principles of treatment and rehabilitation of musculoskeletal disorders
- define the pharmacotherapy of cardiovascular disorders
- acquire skills necessary to perform experimental applications

ASSESSMENT SYSTEM

Module examination: Written exam at the end of the course and performance during the module

Practical examination: Practical exams at the end of

course

Course examination: Written exam at the end of

course

PROGRAM EVALUATION

Evaluation at the end of the course, is done both orally and by using structured evaluation forms

DEPARTMENTS PARTICIPATING IN COURSE-2.4

- Anatomy
- Biochemistry
- Biophysics
- Family Medicine
- Histology and Embryology
- Internal Medicine
- Medical Genetics

- Microbiology
- Orthopedics and Traumatology

Kemal TÜRKÖZ, Assoc. Professor of Pathology

- Pathology
- Physical Medicine and Rehabilitation
- Physiology
- Public Health
- Radiology

LECTURERS / TUTORS

Ahmet ARMAN, Professor of Medical Genetics Ahmet TOPUZOĞLU, Assoc. Professor of Public Health Alper YILDIRIM, Assoc. Professor of Physiology Arzu İLKİ, Assoc, Professor of Microbiology Aymelek YALIN, Professor of Anatomy Ayşe GARİP, Assoc. Professor of Biophysics Berfu Çerçi ÖNGÜN, Instructor of Anatomy Bülent SEZGİN, Assist. Professor of Internal Medicine Cemal GÜRKAN, Instructor of Forensic Sciences Didem RIFKI, Instructor of ENT Duygu GENÇALP, Instructor of Biochemistry Emel LÜLECİ, Professor of Public Health Evrim SiRiN, Assist. Professor of Orthopedics and Traumatology Feriha ERCAN, Professor of Histology & Embryology Güner SOYLEDİR, Professor of Microbiology Güzide Nevsun İNANÇ, Professor of Rheumatology

Leyla CİNEL, Professor of Pathology
Masoud AFSHANİ, Assist. Professor of Histology and
Embryology
Mehmet Burak Aksu, Assist. Professor of Micobiology
Mümtaz GÜRAN, Assist. Professor of Microbiology
Nilgün ÇERİKÇİOĞLU, Professor of Microbiology
Nurtane KARAGİL, Instructor of Arts and Crafts
Onur BUĞDAYCI, Assist. Professor of Radiology
Önder KAYHAN, Professor of Physical Medicine and
Rehabilitation
Özgür KASIMAY, Assoc. Professor of Physiology
Özlem Tüğce KAYA, Instructor of Histology and Embryology

Özlem Tüğçe KAYA, Instructor of Histology and Embryology Pemra ÜNALAN, Professor of Family Medicine Pınar MEGA TİBER, Assoc. Professor of Biophysics Saime BATIREL, Assoc. Professor of Biochemistry Serife SÖKMEZ, Instructor of Turkish Language

Hakan GÜNDÜZ, Professor of Physical Medicine and Rehabilitation

Halil Eren SAKALLI, Assist. Professor of Pharmacology Hande TUĞCAN, Instructor of Modern Indian Dance Hızır KURTEL, Professor of Physiology Hülya CABADAK, Professor of Biophysics Kaan IRGIT, Assoc. Professor of Orthopedics and Traumatology Tuncay DURUÖZ, Professor of Physical Medicine and Rehabilitation Ural VERİMLİ, Assist. Professor of Anatomy Ümit ŞEHİRLİ, Professor of Anatomy Yasemin KURTOĞLU, Instructor of Aerial Fitness

READING / STUDYING MATERIALS

- Arthritis and Allied Conditions: A Textbook of Rheumatology (Koopman) Medical Microbiology (Cedric Mims et al.)
- Basic and Clinical Pharmacology (Bertram G Katzung)
- Basic Pathology (Stanley L Robbins, Marcia Angel, Vinay Kumar)
- Clinical Pharmacology (Laurence DR, Bennet PN)
- Clinical Anatomy for Medical Students: Books (Richard S., M.D. Snell)
- Clinically Oriented Anatomy: Books (Keith L. Moore, Arthur F. Dalley)
- Gray's Anatomy for Students (Richard L. Drake, Richard L. Drake Ph.D., Henry Gray Adam W.M. Mitchell)
- Gray Anatomi (Çeviri Editörü: Prof., Mehmet YILDIRIM, Güneş Kitabevi, 2006)
- Histology and Cell Biology: An Introduction to Pathology (Abraham L Kierszenbaum)
- Human Histology (Alan Stevens, James Lowe)
- Pharmacological Basis of Therapeutics (Goldman & Gilman's)
- Physical Medicine and Rehabilitation (Braddom)
- Review Medical Microbiology (Ernest Jawetz et al)
- Reviw of Medical Microbiology (Patric R Muray, Ken S Rosenthal)
- Textbook of Physiology (Guyton AC)
- The Developing Human (Keith L. Moore)

Discipline	Lecture & Group Discussion	Multidisciplinary Lab. & Clinical Skills Lab. Practice	Total
Anatomy	41	36	77
Biochemistry	4		4
Biophysics	8		8
Family Medicine	1		1
Histology & Embryology	11	4	15
Internal Medicine	3		3
Medical Genetics	1		1
Microbiology	7	2	7
Orthopedics and Travmatology	5		5
Pathology	8	2	10
Pharmacology	6		6
Physical Medicine and Rehabilitation	7		7
Physiology	5	2	9
Public Health	7		7
Radiology	2		2
Subtotal	117	46	161
PBL Module	8		8
ICS-2: Basic Clinical Skills Lab, Polyclinics Visits, Musculoskeletal System Examination, Report writing about the policlinics visit experience, OSCE (Practice Exam)	11	30	41
Turkish for Medical Students-III	36		36
Turkish for Medical Students-III (Interactive session)	16		16
Elective Courses	14		14
Total	202	76	278

	THEORETICAL AND PRACTICAL SESSIONS	LECTURER/TUTOR
	1st WEEK (17- 21 February, 2020)	
Monday	February 17	
08:40-09:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez
09:40-10:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez
10:40-11:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez
11:40-12:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez
13:40-14:30	STUDY TIME	
14:40-15:30	STUDY TIME	
15:40-16-30	MDCN181 Forensic Sciences	Dr. Cemal Gürkan
	MDCN182 Art & Craft for Medicine Students	Inst. Nurtane Karagil
16:40-17:30	MDCN186 Modern Indian Dance	Inst. Hande Tuğcan
	MDCN187 Aerial Fitness and High Intensity Interval Training	Inst. Yasemin Kurtoğlu
Tuesday	February 18	
08:40-09:30	STUDY TIME	
09:40-10:30	Introduction to the course	Dr. Masoud Afshani
10:40-11:30	Muscles and joints: general consideration	Dr. Aymelek Yalın
11:40-12:30	Muscles and joints: general consideration	Dr. Aymelek Yalın
13:40-14:30	Upper extremity bones	Dr. Aymelek Yalın
14:40-15:30	Upper extremity bones	Dr. Aymelek Yalın
15:40-16-30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
16:40-17:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
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Wednesday	February 19	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	The anterior aspect of the arm: pectoral region and the shoulder joint, mammary glands	Dr. Aymelek Yalın
11:40-12:30	The anterior aspect of the arm: pectoral region and the	Dr. Aymelek Yalın
11170 12100	shoulder joint, mammary glands	Birrymeiek ruiiii
13:40-14:30	Anatomy LAB: Upper extremity bones	Dr. Aymelek Yalın
14:40-15:30	Anatomy LAB: Upper extremity bones	Dr. Berfu Çerçi Öngün Dr. Aymelek Yalın
14.40-15.50	Anatomy LAD. Opper extremity bones	Dr. Aymelek Yallı Dr. Berfu Çerçi Öngün
15:40-16-30	Superficial back and posterior aspect of shoulder and arm	Dr. Aymelek Yalın
16:40-17:30	Superficial back and posterior aspect of shoulder and arm	Dr. Aymelek Yalın
Thursday	February 20	
08:40-09:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
09:40-10:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç

10:40-11:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
11:40-12:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
13:40-14:30	Bone and joint	Dr. Feriha Ercan
14:40-15:30	Bone and joint	Dr. Feriha Ercan
15:40-16-30	Anatomy LAB: Superficial back and posterior aspect of	Dr. Aymelek Yalın
	shoulder and arm	Dr. Berfu Çerçi Öngün
16:40-17:30	Anatomy LAB: Superficial back and posterior aspect of	Dr. Aymelek Yalın
	shoulder and arm	Dr. Berfu Çerçi Öngün
Friday	February 21	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	STUDY TIME	
11:40-12:30	Cartilage	Dr. Feriha Ercan
13:40-14:30	Histology of skeletal muscle	Dr. Feriha Ercan
14:40-15:30	Histology of skeletal muscle	Dr. Feriha Ercan
15:40-16-30	STUDY TIME	
16:40-17:30	STUDY TIME	
	2nd WEEK (24 -28 February, 2020)	
Monday	February 24	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	STUDY TIME	
11:40-12:30	STUDY TIME	
13:40-14:30	STUDY TIME	
14:40-15:30	STUDY TIME	
15:40-16-30	STUDY TIME	
16:40-17:30	STUDY TIME	
Tuesday	February 25	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	STUDY TIME	
11:40-12:30	STUDY TIME	
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13:40-14:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
14:40-15:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç
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15:40-16-30 16:40-17:30	Turkish for Medical Students-III (Interactive session) Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç Inst Emine Özerinç

Wednesday	February 26		
08:40-09:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
09:40-10:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
10:40-11:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
11:40-12:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
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13:40-14:30	STUDY TIME		
14:40-15:30	STUDY TIME		
15:40-16-30	STUDY TIME		
16:40-17:30	STUDY TIME		
Thursday	February 27		
08:40-09:30			
09:40-10:30	Y3C3 THEORETICAL EXAM		
10:40-11:30	13C3 THEORETICAL EXAM		
11:40-12:30			
13:40-14:30	Biophysics of muscle contraction	Dr. Günseli Ayşe Garip İnhan	
14:40-15:30	EMG	Dr. Günseli Ayşe Garip İnhan	
15:40-16-30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç	
16:40-17:30	Turkish for Medical Students-III (Interactive session)	Inst Emine Özerinç	
Friday	February 28		
08:40-09:30	Lower extremity	Dr. Aymelek Yalın	
09:40-10:30	Lower extremity	Dr. Aymelek Yalın	
10:40-11:30	Anatomy LAB: Lower extremity	Dr. Aymelek Yalın	
11:40-12:30	Anatomy LAB: Lower extremity	Dr. Berfu Çerçi Öngün Dr. Aymelek Yalın	
11.40-12.50	Anatomy LAB. Lower extremity	Dr. Berfu Çerçi Öngün	
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13:40-14:30	ICS-2: Clinical Skills Lab		
14:40-15:30	ICS-2: Clinical Skills Lab	Dr. Bülent Sezgin,	
15:40-16-30	ICS-2: Clinical Skills Lab	Dr. Didem Rıfkı	
16:40-17:30	STUDY TIME		
	3rd WEEK (02-06 March, 2020)		
Monday	March 02		
08:40-09:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
09:40-10:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
10:40-11:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
11:40-12:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
13:40-14:30	STUDY TIME		

14:40-15:30	STUDY TIME	
15:40-16-30	MDCN181 Forensic Sciences MDCN182 Art & Craft for Medicine Students	Dr. Cemal Gürkan Inst. Nurtane Karagil
16:40-17:30	MDCN186 Modern Indian Dance MDCN187 Aerial Fitness and High Intensity Interval Training	Inst. Hande Tuğcan Inst. Yasemin Kurtoğlu
Tuesday	March 03	
08:40-09:30	Fungal infections of cutaneous and subcutaneous tissues	Dr. Nilgün Çerikçioğlu
09:40-10:30	Parasitic infections of skin	Dr. Zeynep Arzu İlki
10:40-11:30	Mycobacterial and bacterial infections of skin, soft tissue and muscle including anthrax	Dr. Zeynep Arzu İlki
11:40-12:30	Mycobacterial and bacterial infections of skin, soft tissue and muscle including anthrax	Dr. Zeynep Arzu İlki
13:40-14:30	Microbiology LAB: Laboratory diagnosis of skin infections	Dr. Zeynep Arzu İlki Dr. Mümtaz Güran
14:40-15:30	Microbiology LAB: Laboratory diagnosis of skin infections	Dr. Zeynep Arzu İlki Dr. Mümtaz Güran
15:40-16-30	STUDY TIME	
16:40-17:30	STUDY TIME	
Wednesday	March 04	
08:40-09:30	STUDY TIME	
09:40-10:30	Introduction to statics of the body	Dr. Pınar Mega Tiber
10:40-11:30	Introduction to statics of the body	Dr. Pınar Mega Tiber
11:40-12:30	Equilibrium of the body	Dr. Pınar Mega Tiber
13:40-14:30	Physical principles of X - ray radiography	Dr. Pınar Mega Tiber
14:40-15:30	Physical principles of X - ray radiography	Dr. Pınar Mega Tiber
15:40-16-30	Muscle physiology in exercise	Dr. Özgür Kasımay Çakır
16:40-17:30	Muscle physiology in exercise	Dr. Özgür Kasımay Çakır
Thursday	March 05	
08:40-09:30	Physiology LAB: Aerobic exercise	Dr. Özgür Kasımay Çakır Dr. Alper Yıldırım
09:40-10:30	Physiology LAB: Aerobic exercise	Dr. Özgür Kasımay Çakır Dr. Alper Yıldırım
10:40-11:30	Physiology LAB: Aerobic exercise	Dr. Özgür Kasımay Çakır Dr. Alper Yıldırım
11:40-12:30	Physiology LAB: Aerobic exercise	Dr. Özgür Kasımay Çakır Dr. Alper Yıldırım
12.40 14.20	Dublic health consequences of disasters	Dr. Nimet Emel Lillesi
13:40-14:30	Provention of disability in the alderly people	Dr. Nimet Emel Lüleci
14:40-15:30	Prevention of disability in the elderly people	Dr. Nimet Emel Lüleci
15:40-16-30	Prevention of disability in the elderly people	Dr. Nimet Emel Lüleci

16:40-17:30	STUDY TIME		
Friday	March 06		
08:40-09:30	Physiology LAB: EMG	Dr. Özgür Kasımay Çakır, Dr. Alper Yıldırım	
09:40-10:30	Physiology LAB: EMG	Dr. Özgür Kasımay Çakır, Dr. Alper Yıldırım	
10:40-11:30	Physiology LAB: EMG	Dr. Özgür Kasımay Çakır, Dr. Alper Yıldırım	
11:40-12:30	Physiology LAB: EMG	Dr. Özgür Kasımay Çakır, Dr. Alper Yıldırım	
13:40-14:30	Bioenergetics of muscle contraction	Dr. Hülya Cabadak	
14:40-15:30	ICS-2 Research: Data Analysis		
15:40-16-30	ICS-2 Research: Data Analysis	Dr. İlke Akçay Dr. Özge Cumaoğulları Eker	
16:40-17:30	ICS-2 Research: Data Analysis		
	4th WEEK (09-13 March, 2020)		
Monday	March 09		
08:40-09:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
09:40-10:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
10:40-11:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
11:40-12:30	Turkish For Medical Students-III (Foreign Students)	Inst. Şerife Ç. Sokmez	
13:40-14:30	Anterior aspect of forearm and cubital fossa	Dr. Ural Verimli	
14:40-15:30	Anterior aspect of forearm and cubital fossa	Dr. Ural Verimli	
15:40-16-30	MDCN181 Forensic Sciences MDCN182 Art & Craft for Medicine Students MDCN186 Modern Indian Dance	Dr. Cemal Gürkan Inst. Nurtane Karagil	
16:40-17:30	MDCN187 Aerial Fitness and High Intensity Interval Training	Inst. Hande Tuğcan Inst. Yasemin Kurtoğlu	
Tuesday	March 10		
08:40-09:30	STUDY TIME		
09:40-10:30	Posterior aspect of the forearm and the elbow joint	Dr. Ural Verimli	
10:40-11:30	Posterior aspect of the forearm and the elbow joint	Dr. Ural Verimli	

Kovid-19 pandemisi sebebiyle 10 Mart 2020 tarihinden itibaren sınıfta eğitime ara verilmiştir ve uzaktan eğitim yoluyla devam edilmektedir.

Due to the Covid-19 pandemic, education in classrooms has been suspended and continues through distance learning.

 $\frac{https://medicine.emu.edu.tr/en/students/current-students/committees/distance-learning-time-table}{\\$