



CELLULAR METABOLISM AND TRANSPORT COURSE
Year 1 Course 2
December 02, 2019 – January 16, 2020

Coordinator of the Course 1.2 Prof., Mustafa AKKİPRİK & Assoc. Prof., Dilek AKAKIN & Assist. Prof., Ergül MUTLU ALTUNDAĞ	
Module Coordinator Prof., Özlem SARIKAYA & Inst. Dr. Berfu ÇERÇİ ÖNGÜN	Introduction to Clinician Skills (ICS) Coordinators Assoc. Prof., Pemra ÜNALAN & Assist. Prof. Bülent SEZGIN
Coordinator of Clinical Skill Lab. Assoc. Prof., Pemra ÜNALAN & Assist. Prof. Bülent SEZGIN	Coordinator of ICS Res. Lab. Prof., Sibel SAKARYA & Assist. Prof., İlke AKÇAY
Coordinator of Multidisciplinary Students' Lab. Assoc. Prof., Betül KARADEMİR & Assist. Prof., Mümtaz GÜRAN	Coordinator of Assessment Unite Assist. Prof., Cevdet NACAR & Assist. Prof., Can ERZİK & Assist. Prof., H. Eren SAKALLI
Vice-Chief Coordinators	
Assessment Assist. Prof., Cevdet NACAR & Assist. Prof., Mümtaz GÜRAN	Students' Affairs Assist. Prof., Can ERZİK & Assist. Prof., İlke AKÇAY & Assist. Prof., Mümtaz GÜRAN
Chief Coordinator Assoc. Prof., Hasan YANANLI & Assist. Prof., Mümtaz GÜRAN	Coordinator of Medical Education Program Evaluation and Development Commission Prof., Berrak Ç. YEĞEN
Educational Consultant Assoc. Prof., Mehmet Ali GÜLPINAR	
Dean (EMU) Assoc. Prof., Emre HAMURTEKİN	Dean (MU) 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 healthcare
 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 and Endocrine Disorders

Year 3, Course 5: Urinary and Reproductive System and Related Disorders

Cellular Metabolism and Transport

AIM and LEARNING OBJECTIVES of COURSE

Aim: At the end of this committee, first year students will gain knowledge about the metabolic pathways within the cell, structure of the cell membrane and transport mechanisms.

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

1. acquire knowledge related to structural characteristics, functions and regulation of enzymes and coenzymes
2. understand the ATP synthesis and its effect on metabolic pathways
3. describe the constituents and reactions of metabolic pathways within the cell
4. understand membrane structure and its function, physical principles of transport and signaling mechanisms both within and among the cells
5. acquire skills necessary to perform experimental applications.

ASSESSMENT SYSTEM

Module examination: Written exam at the end of module (10 % of final score)

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-1 & MODULE-2

- Biochemistry
- Biophysics
- Physiology

- Medical Biology
- Biostatistics

LECTURERS / TUTORS

Alper YILDIRIM, Assist. Prof., Physiology
 Ayşe KOZANSOY, Instructor, Medical English
 Berrak YEĞEN, Prof., Physiology
 Bülent SEZGİN, Assist. Prof., Internal Medicine
 Cemal GÜRKAN, Instructor, Forensic Sciences
 Cevdet NACAR, Assist. Prof., Biophysics
 Didem RIFKI, Instructor, E.N.T.
 Duygu GENÇALP, Instructor, Biochemistry
 Emine Özerinç, Instructor, Turkish Language
 Ergül Mutlu ALTUNDAĞ, Assist. Prof., Biochemistry
 Goncagül HAKLAR, Prof., Biochemistry
 Günseli Ayşe Garip İNHAN, Assoc. Prof., Biophysics
 Hülya CABADAK, Assoc. Prof., Biophysics

İlke AKÇAY, Assist. Prof., Biostatistics
 Nazan DOĞRUER, Instructor, Medical English
 Nurtane KARAGİL, Instructor, Arts and Crafts
 Özge Cumaoğulları EKER, Instructor of Molecular Biology and Genetics
 Özgür KASIMAY, Assoc. Prof., Physiology
 Saime BATIREL, Assist. Prof., Biochemistry
 Şükrü TÜZMEN, Prof., Medical Biology
 Turgay Bülent GÖKTÜRK, Instructor of Atatürk's Principles and History of Modern Turkey
 Yasemin KURTOĞLU, Instructor, Aerial Fitness and High Intensity Interval Training
 Yaşar İnci ALİCAN, Prof., Physiology

READING / STUDYING MATERIALS

- Biochemistry, Stryer, 4th Ed., Freeman
- Biochemistry, Zubay, 3rd Ed., WCB
- Biostatistics: Basic Concepts and Methodology for the Health Sciences, 10th Ed. Wayne W. Daniel, Chad L. Cross
- Harper's Biochemistry, Murray, Granner, 23rd Ed., Lange Interscience, New Jersey 2003
- Introduction to Biostatistics For Health Sciences, Micheal R. Chernick, Robert H. Friss, Willey
- Lehninger Principles of Biochemistry, Nelson, Cox, 3rd edition, Worth
- Medical Statistics at a Glance, Aviva Petrie, Caroline Sabin, Blackwell Science, London 2003
- Physics, Giancoli, 4th Ed., Prentice Hall
- Practical Statistics For Medical Research, Douglas Altman, Chapman & Hall, London 1995
- Principles of Physiology, Bern and Levy, 4th Ed.
- Temel Biyoistatistik, Mustafa Şenocak, Çağlayan Kitabevi, İstanbul 1990
- Textbook of Physiology, Guyton and Hall, 10th Ed.
- The Cell: A Molecular Approach, Cooper, 2nd Ed., ASM Press

SUMMARY OF THE COURSE 1.2			
Discipline	Lecture & Group Discussion	Multidisciplinary Lab. & Clinical Skills Lab. Practice	Total
Medical Biology	2		2
Biochemistry	26	9	35
Biostatistics	10		10
Physiology	8	2	10
Biophysics	20		20
Subtotal	66	11	77
PBL Module	8		8
ICS-1 Computer Skills in Medicine and Student Research Activities	12		12
Medical English	12		12
Atatürk's Principles and History of Modern Turkey	8		8
TFMS101-Turkish for Medical Students-1 (for foreign students)	24		24
TFMS101-Turkish for Medical Students-1 (for foreign students)-Interactive Session	12		12
Electives	12		12
TOTAL	154	11	165

	THEORETICAL AND PRACTICAL SESSIONS	LECTURER/TUTOR
Week-1 (02 December - 06 December, 2019)		
Monday	02 December	
08:40-09:30	TFMS101-Turkish for Medical Students-1 (for foreign students)	Inst. Emine Özerinç
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Medical English (Gr 1 & 2)	Dr. Nazan Doğruer Inst. Ayşe Kozansoy
14:40-15:30		
15:40-16:30	Elective Course – I (for Turkish students) MDCN181 – Theoretical and Applied Forensic Sciences MDCN182 – Arts and Crafts for Medical Students MDCN184 – Aerial Fitness and High Intensity Interval Training	Dr. Cemal Gürkan Inst. Nurtane Karagil Inst. Yasemin Kurtoğlu
16:40-17:30		
Tuesday	03 December	
08:40-09:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Ins. Emine Özerinç
09:40-10:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Ins. Emine Özerinç
10:40-11:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
11:40-12:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
13:40-14:30	Homeostasis	Dr. Berrak Yeğen
14:40-15:30	Bioelectric potentials	Dr. Berrak Yeğen
15:40-16:30	Bioelectric potentials	Dr. Berrak Yeğen
16:40-17:30	STUDY TIME	
Wednesday	04 December	
08:40-09:30	ICS-1 Research: Contents in the Introduction part of a research study	Dr. İlke Akçay Dr. Özge Cumaoğulları Eker
09:40-10:30	ICS -1 Research: Topic & Title	
10:40-11:30	ICS -1 Research: General and Specific objectives	
11:40-12:30	ICS -1 Research: Writing a research question	
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	05 December	
08:40-09:30	First Aid Written Exam	Dr. Nevin Yılmaz Dr. Nilüfer Güzoğlu Dr. Amber Eker Dr. Bülent Sezgin Dr. Didem Rıfkı
09:40-10:30	First Aid Practical Exam	
10:40-11:30	First Aid Practical Exam	
11:40-12:30	First Aid Practical Exam	
13:40-14:30	First Aid Practical Exam	
14:40-15:30	First Aid Practical Exam	
15:40-16:30	First Aid Practical Exam	
16:40-17:30	STUDY TIME	

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Friday	06 December	
08:40-09:30	Signal transduction	Dr. Özgür Kasımay Çakır
09:40-10:30	Cell to cell adhesions	Dr. Özgür Kasımay Çakır
10:40-11:30	Physiology LAB: Cell Physiology-Group A	Dr. Özgür Kasımay Çakır
11:40-12:30	Physiology LAB: Cell Physiology-Group A	Dr. Alper Yıldırım
13:40-14:30	Intercellular communication	Dr. Alper Yıldırım
14:40-15:30	Physiology LAB: Cell Physiology-Group B	Dr. Özgür Kasımay Çakır
15:40-16:30	Physiology LAB: Cell Physiology-Group B	Dr. Alper Yıldırım
16:40-17:30	STUDY TIME	
Week-2 (09-13 December, 2019)		
Monday	09 December	
08:40-09:30	TFMS101-Turkish for Medical Students-1 (for foreign students)	Inst. Emine Özerinç
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Medical English (Gr 1 & 2)	Dr. Nazan Doğruer Inst. Ayşe Kozansoy
14:40-15:30		
15:40-16:30	Elective Course – I (for Turkish students) MDCN181 – Theoretical and Applied Forensic Sciences MDCN182 – Arts and Crafts for Medical Students MDCN184 – MDCN184 – Aerial Fitness and High Intensity Interval Training	Dr. Cemal Gürkan Inst. Nurtane Karagil Inst. Yasemin Kurtoglu
16:40-17:30		
Tuesday	10 December	
08:40-09:30	STUDY TIME	
09:40-10:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
10:40-11:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
11:40-12:30	Overview of glycolysis	Dr. Saime Batirel
13:40-14:30	Reactions of glycolysis	Dr. Saime Batirel
14:40-15:30	Reactions of glycolysis	Dr. Saime Batirel
15:40-16:30	Regulation of glycolysis	Dr. Saime Batirel
16:40-17:30	Regulation of glycolysis	Dr. Saime Batirel
Wednesday	11 December	
08:40-09:30	PBL Module -1	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
09:40-10:30	PBL Module -1	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
10:40-11:30	Introduction to statistical analysis	Dr. İlke Akçay
11:40-12:30	Sampling, distribution and estimation	Dr. İlke Akçay
13:40-14:30	Tricarboxylic acid cycle and hexose monophosphate shunt	Dr. Goncagül Haklar
14:40-15:30	Tricarboxylic acid cycle and hexose monophosphate shunt	Dr. Goncagül Haklar
15:40-16:30	Tricarboxylic acid cycle and hexose monophosphate shunt	Dr. Goncagül Haklar

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16:40-17:30	Tricarboxylic acid cycle and hexose monophosphate shunt	Dr. Goncagül Haklar
Thursday	12 December	
08:40-09:30	Y2C2 THEORETICAL EXAM	
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Physical characteristics of membrane structure and function	Dr. Cevdet Nacar
14:40-15:30	Membrane proteins	Dr. Cevdet Nacar
15:40-16:30	Introduction to bioelectricity-I	Dr. Cevdet Nacar
16:40-17:30	STUDY TIME	
Friday	13 December	
08:40-09:30	STUDY TIME	
09:40-10:30	Introduction to bioelectricity-I	Dr. Cevdet Nacar
10:40-11:30	Introduction to bioelectricity-II	Dr. Cevdet Nacar
11:40-12:30	Introduction to bioelectricity-II	Dr. Cevdet Nacar
13:40-14:30	ICS-1-Research:Contents in Material and Methods part of a research study	Dr. İlke Akçay Dr. Özge Cumaoğulları Eker
14:40-15:30	ICS-1- Research:Questionnaire as a data collection tool	
15:40-16:30	ICS-1- Research: Questionnaire design	
16:40-17:30	ICS-1- Research: Questionnaire design	
Week-3 (16- 20 December, 2019)		
Monday	16 December	
08:40-09:30	TFMS101-Turkish for Medical Students-1 (for foreign students)	Inst. Emine Özerinç
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Medical English (Gr 1 & 2)	Dr. Nazan Doğruer Inst. Ayşe Kozansoy
14:40-15:30		
15:40-16:30	Elective Course – I (for Turkish students) MDCN181 – Theoretical and Applied Forensic Sciences MDCN182 – Arts and Crafts for Medical Students	Dr. Cemal Gürkan Inst. Nurtane Karagil Inst. Yasemin Kurtuluş
16:40-17:30	MDCN184 – MDCN184 – Aerial Fitness and High Intensity Interval Training	
Tuesday	17 December	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
11:40-12:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
13:40-14:30	Applications of recombinant DNA technology in medicine	Dr. Şükrü Tüzmen
14:40-15:30	Applications of recombinant DNA technology in medicine	Dr. Şükrü Tüzmen
15:40-16:30	PBL Module -2	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
16:40-17:30	PBL Module -2	Dr. Duygu Gençalp

		Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
Wednesday	18 December	
08:40-09:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
09:40-10:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
10:40-11:30	What is probability and probability distribution?	Dr. İlke Akçay
11:40-12:30	Bayes' Theorem	Dr. İlke Akçay
13:40-14:30	Electron transport chain	Dr. Goncagül Haklar
14:40-15:30	Electron transport chain	Dr. Goncagül Haklar
15:40-16:30	Oxidative Phosphorylation	Dr. Goncagül Haklar
16:40-17:30	Oxidative Phosphorylation	Dr. Goncagül Haklar
Thursday	19 December	
08:40-09:30	Y3C2 THEORETICAL EXAM	
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Physical principles: Diffusion and facilitated transport	Dr. Hülya Cabadak
14:40-15:30	Physical principles: Diffusion and facilitated transport	Dr. Hülya Cabadak
15:40-16:30	Active transport and secondary active transport	Dr. Hülya Cabadak
16:40-17:30	STUDY TIME	
Friday	20 December	
08:40-09:30	ICS-1-Research: Sampling	Dr. İlke Akçay Dr. Özge Cumaogulları Eker
09:40-10:30	ICS-1- Research: Sampling	
10:40-11:30	ICS-1- Research: How to do effective presentations?	
11:40-12:30	ICS-1- Research: How to do effective presentations?	
13:40-14:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
14:40-15:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
15:40-16:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
16:40-17:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
Week-4 (23- 27 December, 2019)		
Monday	23 December	
08:40-09:30	TFMS101-Turkish for Medical Students-1 (for foreign students)	Inst. Emine Özerinç
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Medical English (Gr 1 & 2)	Dr. Nazan Doğruer Inst. Ayşe Kozansoy
14:40-15:30		

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15:40-16:30	Elective Course – I (for Turkish students) MDCN181 – Theoretical and Applied Forensic Sciences	Dr. Cemal Gürkan Inst. Nurtane Karagil
16:40-17:30	MDCN182 – Arts and Crafts for Medical Students MDCN184 – MDCN184 – Aerial Fitness and High Intensity Interval Training	Inst. Yasemin Kurtoğlu
Tuesday	24 December	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	Testing statistical hypothesis	Dr. İlke Akçay
11:40-12:30	Types of errors in statistical inference	Dr. İlke Akçay
13:40-14:30	Principles of statistical analysis	Dr. İlke Akçay
14:40-15:30	Elements of statistical interference	Dr. İlke Akçay
15:40-16:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
16:40-17:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
Wednesday	25 December	
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	
Thursday	26 December	
08:40-09:30	Introduction to metabolism and metabolic control	Dr. Ergül Mutlu Altundağ
09:40-10:30	Introduction to metabolism and metabolic control	Dr. Ergül Mutlu Altundağ
10:40-11:30	PBL Module -3	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
11:40-12:30	PBL Module -3	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
13:40-14:30	Electrochemical potentials, Nernst potential	Dr. Günseli Ayşe Garip İnan
14:40-15:30	Membrane potentials and action potential	Dr. Günseli Ayşe Garip İnan
15:40-16:30	Membrane potentials and action potential	Dr. Günseli Ayşe Garip İnan
16:40-17:30	Flow of energy in nature, first law of thermodynamics	Dr. Günseli Ayşe Garip İnan
Friday	27 December	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	Flow of energy in nature, first law of thermodynamics	Dr. Günseli Ayşe Garip İnan
11:40-12:30	The second law of thermodynamics, entropy, free energy	Dr. Günseli Ayşe Garip İnan

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13:40-14:30	The second law of thermodynamics, entropy, free energy	Dr. Günseli Ayşe Garip İnan
14:40-15:30	Free energy and thermodynamic properties of water	Dr. Günseli Ayşe Garip İnan
15:40-16:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
16:40-17:30	TFMS101 – Turkish for Medical Students-I (Foreign Students)- Interactive Session	Inst. Emine Özerinç
Week-5 (30 December, 2019- 03 January, 2020)		
Monday	30 December	
08:40-09:30	TFMS101-Turkish for Medical Students-1 (for foreign students)	Inst. Emine Özerinç
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Medical English (Gr 1 & 2)	Dr. Nazan Doğruer Inst. Ayşe Kozansoy
14:40-15:30		
15:40-16:30	Elective Course – I (for Turkish students) MDCN181 – Theoretical and Applied Forensic Sciences MDCN182 – Arts and Crafts for Medical Students MDCN184 – MDCN184 – Aerial Fitness and High Intensity Interval Training	Dr. Cemal Gürkan Inst. Nurtane Karagil Inst. Yasemin Kurtoğlu
16:40-17:30		
Tuesday	31 December	
08:40-09:30	HOLIDAY	
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30		
14:40-15:30		
15:40-16:30		
16:40-17:30		
Wednesday	01 January	
08:40-09:30	NEW YEAR HOLIDAY	
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30		
14:40-15:30		
15:40-16:30		
16:40-17:30		
Thursday	02 January	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	PBL Module -4	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk

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11:40-12:30	PBL Module -4	Dr. Duygu Gençalp Dr. Özge Eker Dr. Maryam Norouzbahari Inst. Gizem Şanlıtürk
13:40-14:30	Oxidation of lipids	Dr. Saime Batirel
14:40-15:30	Oxidation of lipids	Dr. Saime Batirel
15:40-16:30	Biosynthesis of lipids	Dr. Saime Batirel
16:40-17:30	STUDY TIME	
Friday	03 January	
08:40-09:30	Biosynthesis of lipids	Dr. Saime Batirel
09:40-10:30	Biosynthesis of lipids	Dr. Saime Batirel
10:40-11:30	Biosynthesis of lipids	Dr. Saime Batirel
11:40-12:30	Gluconeogenesis and glycogen metabolism-1	Dr. Saime Batirel
13:40-14:30	Coupling of biological reactions with high energy metabolite	Dr. Hülya Cabadak
14:40-15:30	Coupling of biological reactions with high energy metabolite	Dr. Hülya Cabadak
15:40-16:30	Energetics of electron transport	Dr. Hülya Cabadak
16:40-17:30	STUDY TIME	
Week 6 (06- 10 January, 2020)		
Monday	06 January	
08:40-09:30	TFMS101-Turkish for Medical Students-1 (for foreign students)	Inst. Emine Özerinç
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30	Medical English (Gr 1 & 2)	Dr. Nazan Doğruer Inst. Ayşe Kozansoy
14:40-15:30		
15:40-16:30	Elective Course – I (for Turkish students) MDCN181 – Theoretical and Applied Forensic Sciences MDCN182 – Arts and Crafts for Medical Students MDCN184 – MDCN184 – Aerial Fitness and High Intensity Interval Training	Dr. Cemal Gürkan Inst. Nurtane Karagil Inst. Yasemin Kurtoğlu
16:40-17:30		
Tuesday	07 January	
08:40-09:30	Difference between parametric and nonparametric methods; Introduction to parametric methods	Dr. İlke Akçay
09:40-10:30	One sample t-test, unpaired t-test and paired t-test	Dr. İlke Akçay
10:40-11:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
11:40-12:30	Atatürk's Principles and History of Modern Turkey	Dr. Turgay Bülent Göktürk
13:40-14:30	Gluconeogenesis and glycogen metabolism-1	Dr. Saime Batirel
14:40-15:30	Gluconeogenesis and glycogen metabolism-2	Dr. Saime Batirel
15:40-16:30	Gluconeogenesis and glycogen metabolism-2	Dr. Saime Batirel
16:40-17:30	STUDY TIME	
Wednesday	08 January	
08:40-09:30	Transport of substances	Dr. Yaşar İnci Alican
09:40-10:30	Transport of substances	Dr. Yaşar İnci Alican
10:40-11:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Ergül Mutlu Altundağ

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11:40-12:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Duygu Gençalp	
13:40-14:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Ergül Mutlu Altundağ Dr. Duygu Gençalp	
14:40-15:30	Biochemistry LAB: Anaerobic Glycolysis-Group A		
15:40-16:30	Biochemistry LAB: Anaerobic Glycolysis-Group A		
16:40-17:30	Biochemistry LAB: Anaerobic Glycolysis-Group A		
Thursday	09 January		
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		
Friday	10 January		
08:40-09:30	Role of organelles in the metabolism	Dr. Ergül Mutlu Altundağ	
09:40-10:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Ergül Mutlu Altundağ	
10:40-11:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Duygu Gençalp	
11:40-12:30	Biochemistry LAB: Anaerobic Glycolysis-Group B		
13:40-14:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Ergül Mutlu Altundağ	
14:40-15:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Duygu Gençalp	
15:40-16:30	Biochemistry LAB: Anaerobic Glycolysis-Group B		
16:40-17:30	STUDY TIME		
Week 7 (13- 17 January, 2020)			
Monday	13 January		
08:40-09:30	STUDY TIME		
09:40-10:30	Biochemistry LAB : Electron transport chain Group A	Dr. Ergül Mutlu Altundağ	
10:40-11:30	Biochemistry LAB : Electron transport chain Group A	Dr. Duygu Gençalp	
11:40-12:30	Biochemistry LAB : Electron transport chain Group A		
13:40-14:30	Biochemistry LAB : Electron transport chain Group B	Dr. Ergül Mutlu Altundağ	
14:40-15:30	Biochemistry LAB : Electron transport chain Group B	Dr. Duygu Gençalp	
15:40-16:30	Biochemistry LAB : Electron transport chain Group B		
16:40-17:30	STUDY TIME		
Tuesday	14 January		
08:40-09:30	PRACTICAL EXAM		
09:40-10:30			
10:40-11:30			
11:40-12:30			
13:40-14:30			
14:40-15:30			
15:40-16:30			
16:40-17:30			
Wednesday		15 January	

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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	
Thursday	16 January	
08:40-09:30	Y1C2 THEORETICAL EXAM	
09:40-10:30		
10:40-11:30		
11:40-12:30		
13:40-14:30		
14:40-15:30		
15:40-16:30		
16:40-17:30		