



CELLULAR METABOLISM AND TRANSPORT COURSE
Year 1 Course 2
November 30, 2015 – January 15, 2016

Coordinator of the Course 1.2 Assist. Prof., Ayşe ÜLGEN	Coordinator of the Module 1.2 Assist. Prof., Kerem TERALI
Coordinator of Multidisciplinary Students' Lab. Assist. Prof., Kerem TERALI	Coordinator of Clinical Skill Lab. Instructor, Dr. Berfu Çerçi ÖNGÜN
Coordinators of Assessment Unit Assist. Prof., Mümtaz GÜRAN , Assist. Prof., Ayşe ÜLGEN, Assist. Prof., Mevhibe HOCAOĞLU, Assist. Prof., Kerem TERALI	Coordinator of ICS Res. Lab. Assist. Prof., Mevhibe HOCAOĞLU
Year 1 Coordinators Assoc. Prof., Serap ŞİRVANCI & Assoc. Prof., Mustafa AKKİPRİK	
Module Coordinator Assoc. Prof., Özlem SARIKAYA	Introduction to Clinician Skills (ICS) Coordinators Prof., Sibel KALAÇA, Assoc. Prof., Pemra ÜNALAN
Coordinator of Multidisciplinary Students' Lab. Assoc. Prof., Betül KARADEMİR	Coordinator of Assessment Unit Asist. Prof., Cevdet NACAR
Vice-Chief Coordinators	
Assessment Asist. Prof., Cevdet NACAR	Students' Affairs Asist. Prof., Can ERZİK
Chief Coordinator Assoc. Prof., Hasan YANANLI	Coordinator of Medical Education Program Evaluation and Development Commission Prof., Berrak Ç. YEĞEN
Educational Consultant Assoc. Prof., Mehmet Ali GÜLPINAR	
Dean (EMU) Prof., Nahide GÖKÇORA	Dean (MU) Prof., Ömer GÜNAL

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 course + Performance points(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
- Histology & Emb.

- Medical Biology
- Biostatistics
- Physiology

LECTURERS / TUTORS

Alper YILDIRIM, Assist. Prof., Physiology
Ayfer ŞEN, Instructor, Medical English
Ayşe GARİP, Assoc. Prof., Biophysics
Ayşe KOZANSOY, Instructor, Medical English
Ayşe ÜLGEN, Assist. Prof., Biostatistics
Berrak YEĞEN, Prof., Physiology
Betül KARADEMİR, Assist. Prof., Biochemistry
Cevdet NACAR, Assist. Prof., Biophysics
Emine ÖZERİNÇ, Instructor, Turkish
Goncagül HAKLAR, Prof., Biochemistry
Huriye İCİL, Prof. Chemistry
Hülya CABADAK, Assoc. Prof., Biophysics

İnci ALİCAN, Prof., Physiology
Kerem TERALI, Assist. Prof., Biochemistry
Mevhibe HOCAOĞLU, Assist. Prof., Public Health
Mümtaz GÜRAN, Assist. Prof., Microbiology
Naife SEVİNÇ, Instructor, Clinical Psychology
Özgür KASIMAY, Assoc. Prof., Physiology
Özlem SARIKAYA, Assoc. Dr., Public Health
Saime BATIREL, Assist. Prof., Biochemistry
Şerife ÇELEBİ, Instructor, Turkish
Sinem YILDIZ, Assist. Prof., Medical Education
Şükrü TÜZMEN, Assoc. Prof., Medical Biology
Turgay Bülent GÖKTÜRK, Instructor, Atatürk Research Center

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
- Molecular Biology of the Cell, Alberts et al. 5rd Ed., Garland

SUMMARY OF THE COURSE 1.2			
Discipline	Lecture & Group Discussion	Multidisciplinary Lab. & Clinical Skills Lab. Practice	Total
Medical Biology	4		4
Biochemistry	26	9	35
Biostatistics	10		10
Physiology	8	2	10
Biophysics	20		20
Subtotal	68	11	79
PBL Module	8		8
ICS-1 Computer Skills in Medicine and Student Research Activities	12		12
Medical English	20		20
Atatürk's Principles and History of Modern Turkey	10		10
Communication in Turkish I	26		26
Electives	17		17
TOTAL	161	11	172

SEVEN WEEK PROGRAM		
	Theoretical and Practical Sessions	Lecturer(s) / Tutor(s)
1. WEEK (November 30-December 4, 2015)		
Monday,	30 November, 2015	
08:40-09:30	STUDY TIME	
09:40-10:30	Introduction to the course	
10:40-11:30	Opening Lecture	
11:40-12:30	STUDY TIME	
13:40-14:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
14:40-15:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
15:40-16:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
16:40-17:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
Tuesday,	1 December, 2015	
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
10:40-11:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
11:40-12:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
13:40-14:30	STUDY TIME	
14:40-15:30	Electives	
15:40-16:30	Electives	
16:40-17:30	Electives	
Wednesday,	2 December, 2015	
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
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	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
14:40-15:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
15:40-16:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
16:40-17:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
Thursday,	3 December, 2015	

08:40-09:30	Introduction to bioelectricity-I	Dr. Cevdet Nacar
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	Introduction to metabolism and metabolic control	Dr. Saime Batirel
14:40-15:30	Introduction to metabolism and metabolic control	Dr. Saime Batirel
15:40-16:30	Overview of glycolysis	Dr. Saime Batirel
16:40-17:30	STUDY TIME	
Friday, 4 December, 2015		
08:40-09:30	Reactions of glycolysis	Dr. Betül Karademir
09:40-10:30	Reactions of glycolysis	Dr. Betül Karademir
10:40-11:30	Regulation of glycolysis	Dr. Betül Karademir
11:40-12:30	Regulation of glycolysis	Dr. Betül Karademir
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	
2. WEEK (7-11 December, 2015)		
Monday, 7 December, 2015		
08:40-09:30	Applications of recombinant DNA technology in medicine	Dr. Şükrü Tüzmen
09:40-10:30	Applications of recombinant DNA technology in medicine	Dr. Şükrü Tüzmen
10:40-11:30	Medical English GP I	Ayşe Kozansoy
11:40-12:30	Medical English GP I	Ayşe Kozansoy
13:40-14:30	ICS-1; Comp&SRA: Creating a research question, discussion about	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
14:40-15:30	ICS-1; Comp&SRA: How to do effective presentations?	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
15:40-16:30	ICS-1; Comp&SRA: Effective use of powerpoint during presentation	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
16:40-17:30	ICS-1; Comp&SRA: Powerpoint practicum	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
Tuesday, 8 December, 2015		
08:40-09:30	ICS-1; Questionnaire as a research tool	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
09:40-10:30	ICS-1; Comp & SRA: Questionnaire design	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
10:40-11:30	ICS-1; Comp & SRA: Questionnaire design	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
11:40-12:30	ICS-1; Discussion of possible questions for students' research activity	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
13:40-14:30	STUDY TIME	

14:40-15:30	Electives	
15:40-16:30	Electives	
16:40-17:30	Electives	
Wednesday,	9 December, 2015	
08:40-09:30	STUDY TIME	
09:40-10:30	Genome of mitochondria	Dr. Şükrü Tüzmen
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	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
14:40-15:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
15:40-16:30	PBL Module-1	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
16:40-17:30	PBL Module-1	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
Thursday,	10 December, 2015	
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
10:40-11:30	Testing statistical hypotheses-1	Dr. Ayşe Ülgen
11:40-12:30	Testing statistical hypotheses-1	Dr. Ayşe Ülgen
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,	11 December, 2015	
08:40-09:30	Medical English GP II	Ayfer Şen
09:40-10:30	Medical English GP II	Ayfer Şen
10:40-11:30	STUDY TIME	
11:40-12:30	STUDY TIME	
13:40-14:30	PBL Module-2	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
14:40-15:30	PBL Module-2	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
15:40-16:30	Physical characteristics of membrane structure and function	Dr. Cevdet Nacar
16:40-17:30	Membrane proteins	Dr. Cevdet Nacar
3. WEEK (14-18 December, 2015)		
Monday,	14 December, 2015	

08:40-09:30	Importance of genome projects in medicine	Dr. Şükrü Tüzmen
09:40-10:30	Medical English GP I	Ayşe Kozansoy
10:40-11:30	Medical English GP I	Ayşe Kozansoy
11:40-12:30	Intercellular communication	Dr. İnci Alican
13:40-14:30	Transport of substances	Dr. İnci Alican
14:40-15:30	Transport of substances	Dr. İnci Alican
15:40-16:30	Medical English GP II	Ayfer Şen
16:40-17:30	Medical English GP II	Ayfer Şen
Tuesday, 15 December, 2015		
08:40-09:30	STUDY TIME FOR PBL	
09:40-10:30	What is probability and probability distribution?	Dr. Ayşe Ülgen
10:40-11:30	Bayes' Theorem	Dr. Ayşe Ülgen
11:40-12:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
13:40-14:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
14:40-15:30	Electives	
15:40-16:30	Electives	
16:40-17:30	Electives	
Wednesday, 16 December, 2015		
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
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	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
14:40-15:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
15:40-16:30	PBL Module-3	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
16:40-17:30	PBL Module-3	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
Thursday, 17 December, 2015		
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
10:40-11:30	Parametric and nonparametric methods, one sample t-test	Dr. Ayşe Ülgen

11:40-12:30	Unpaired t-test and paired t-test	Dr. Ayşe Ülgen
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 FOR PBL	
Friday,	18 December, 2015	
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
10:40-11:30	Sign test, Mann-Whitney U test	Dr. Ayşe Ülgen
11:40-12:30	Wilcoxon test (paired samples) and review	Dr. Ayşe Ülgen
13:40-14:30	PBL Module-4	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
14:40-15:30	PBL Module-4	Dr.Mümtaz Güran, Dr.Ayşe Ülgen, Naife Sevdalı, Dr. Kerem Teralı
15:40-16:30	Medical English GP II	Ayfer Şen
16.40-17.30	Medical English GP II	Ayfer Şen
4. WEEK (21-25 December, 2015)		
Monday,	21 December, 2015	
08:40-09:30	Signal Transduction	Dr. Özgür Kasımay
09:40-10:30	Cell to cell adhesion	Dr. Özgür Kasımay
10:40-11:30	Medical English GP I	Ayşe Kozansoy
11:40-12:30	Medical English GP I	Ayşe Kozansoy
13:40-14:30	Physiology LAB: Cell Physiology-Group A	Dr. Özgür Kasımay, Dr. Alper Yıldırım
14:40-15:30	Physiology LAB: Cell Physiology-Group A	Dr. Özgür Kasımay, Dr. Alper Yıldırım
15:40-16:30	Physiology LAB: Cell Physiology-Group B	Dr. Özgür Kasımay, Dr. Alper Yıldırım
16:40-17:30	Physiology LAB: Cell Physiology-Group B	Dr. Özgür Kasımay, Dr. Alper Yıldırım
Tuesday,	22 December, 2015	
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
10:40-11:30	Introduction to statistical analysis, sampling distribution and estimation	Dr. Ayşe Ülgen
11:40-12:30	Introduction to statistical analysis, sampling distribution and estimation	Dr. Ayşe Ülgen
13:40-14:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
14:40-15:30	Electives	
15:40-16:30	Electives	
16:40-17:30	Electives	

Wednesday,	23 December, 2015	
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		
Thursday,	24 December, 2015	
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,	25 December, 2015	
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		
5. WEEK (December 28,2015 – January 1, 2016)		
Monday,	28 December, 2015	
08:40-09:30	STUDY TIME	
09:40-10:30	STUDY TIME	
10:40-11:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
11:40-12:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
13:40-14:30	Electrochemical potentials, Nernst potential	Dr. Ayşe Garip
14:40-15:30	Membrane potentials and action potential	Dr. Ayşe Garip
15:40-16:30	Membrane potentials and action potential	Dr. Ayşe Garip
16:40-17:30	Free energy and thermodynamic properties of water	Dr. Ayşe Garip
Tuesday,	29 December, 2015	
08:40-09:30	STUDY TIME	
09:40-10:30	Flow of energy in nature, first law of thermodynamics	Dr. Ayşe Garip
10:40-11:30	Flow of energy in nature, first law of thermodynamics	Dr. Ayşe Garip
11:40-12:30	The second law of thermodynamics, entropy, free energy	Dr. Ayşe Garip
13:40-14:30	The second law of thermodynamics, entropy, free energy	Dr. Ayşe Garip

14:40-15:30	Electives	
15:40-16:30	Electives	
16:40-17:30	Electives	
Wednesday, 30 December, 2015		
08:40-09:30	Electron Transport Chain	Dr. Goncagül Haklar
09:40-10:30	Electron Transport Chain	Dr. Goncagül Haklar
10:40-11:30	Oxidative phosphorylation	Dr. Goncagül Haklar
11:40-12:30	Oxidative phosphorylation	Dr. Goncagül Haklar
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
16:40-17:30	Tricarboxylic acid cycle and hexose monophosphate shunt	Dr. Goncagül Haklar
Thursday, 31 December, 2015		
08:40-09:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
09:40-10:30	Medical English GP I & II	Ayşe Kozansoy, Ayfer Şen
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	STUDY TIME	
14:40-15:30	STUDY TIME	
15:40-16:30	STUDY TIME	
16:40-17:30	STUDY TIME	
Friday, 1 January, 2016		
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		
6. WEEK (4-8 January, 2016)		
Monday, 4 January, 2016		
08:30-09:30	Oxidation of lipids	Dr. Saime Batirel
09:40-10:30	Oxidation of lipids	Dr. Saime Batirel
10:40-11:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Betül Karademir, Dr. Saime Batirel
11:40-12:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Betül Karademir, Dr. Saime Batirel
13:40-14:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Betül Karademir, Dr. Saime Batirel
14:40-15:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Betül Karademir, Dr. Saime Batirel
15:40-16:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Betül Karademir,

		Dr. Saime Batirel
16:40-17:30	Biochemistry LAB: Anaerobic Glycolysis-Group A	Dr. Betül Karademir, Dr. Saime Batirel
Tuesday,	5 January, 2016	
08:40-09:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Betül Karademir, Dr. Saime Batirel
09:40-10:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Betül Karademir, Dr. Saime Batirel
10:40-11:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Betül Karademir, Dr. Saime Batirel
11:40-12:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Betül Karademir, Dr. Saime Batirel
13:40-14:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Betül Karademir, Dr. Saime Batirel
14:40-15:30	Biochemistry LAB: Anaerobic Glycolysis-Group B	Dr. Betül Karademir, Dr. Saime Batirel
15:40-16:30	Electives	
16:40-17:30	Electives	
Wednesday,	6 January, 2016	
08:40-09:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
09:40-10:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
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	ICS-1; Comp&SRA: Presentation of suggested research topics by students	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
14:40-15:30	ICS-1; Comp&SRA: Presentation of suggested research topics by students	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
15:40:16:30	ICS-1; Comp&SRA: Presentation of suggested research topics by students	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
16:40-17:30	ICS-1; Comp&SRA: Presentation of suggested research topics by students	Dr. Sinem Yıldız İnanıcı, Dr. Ayşe Ülgen, Dr. Mevhibe Hocaoğlu
Thursday,	7 January, 2016	
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	Biosynthesis of lipids	Dr. Saime Batirel
13:40-14:30	Biochemistry LAB : Electron transport chain Group A & B	Dr. Betül Karademir, Dr. Saime Batirel
14:40-15:30	Biochemistry LAB : Electron transport chain Group A & B	Dr. Betül Karademir, Dr. Saime Batirel
15:40:16:30	Biochemistry LAB : Electron transport chain Group A & B	Dr. Betül Karademir, Dr. Saime Batirel

13:40-14:30	STUDY TIME	
Friday,	8 January, 2016	
08:40-09:30	Gluconeogenesis and glycogen metabolism-1	Dr. Betül Karademir
09:40-10:30	Gluconeogenesis and glycogen metabolism-1	Dr. Betül Karademir
10:40-11:30	Gluconeogenesis and glycogen metabolism-2	Dr. Betül Karademir
11:40-12:30	Gluconeogenesis and glycogen metabolism-2	Dr. Betül Karademir
13:40-14:30	Role of organelles in the metabolism	Dr. Betül Karademir
14:40-15:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
15:40-16:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
16:40-17:30	Communication in Turkish-I	Emine Özerinç, Şerife Çelebi
7. WEEK (11-15 January, 2016)		
Monday,	11 January, 2016	
08:30-09:30		
09:40-10:30	PRACTICAL EXAM	
10:40-11:30		
11:40-12:30		
Tuesday,	12 January, 2016	
08:40-09:30		
09:40-10:30	PRACTICAL EXAM	
10:40-11:30		
11:40-12:30		
Wednesday,	13 January, 2016	
08:40-09:30		
09:40-10:30		
10:40-11:30		
11:40-12:30		
Thursday,	14 January, 2016	
08:40-09:30		
09:40-10:30		
10:40-11:30		
11:40-12:30		
Friday,	15 January, 2016	
08:40-09:30		
09:40-10:30	THEORETICAL EXAMINATION	
10:40-11:30		
11:40-12:30		