|  |  |  |  |
| --- | --- | --- | --- |
| **C:\Users\Namariel\Downloads\TıpF (1)\TıpF\TıpF-2.png**  **MARMARA UNIVERSITY SCHOOL of MEDICINE** | | | |
| CELLULAR METABOLISM AND TRANSPORT  YEAR 1 COURSE 2  December 06, 2021 – January 20, 2022 | | | |
| **Coordinator of the Course 1.2**  Prof. Betül YILMAZ | | **Coordinator of the Module 1.2**  Assoc.Prof. Banu AYDIN OMAY | |
| **Year 1 Coordinators**  Prof. Dilek AKAKIN & Prof. Mustafa AKKİPRİK | | | |
| **Module Coordinators**  Prof. Rezzan GÜLHAN, Assist.Prof. Sinem YILDIZ İNANICI | | **Introduction to Clinical Practice (ICP) Coordinators**  Prof. Gülru Pemra CÖBEK ÜNALAN,  Prof. Serap ÇİFÇİLİ | |
| **Coordinator of Multidisciplinary Students’ Lab**.  Prof. Betül YILMAZ | | **Coordinator of Clinical Skills Lab.**  Assoc. Prof. Çiğdem APAYDIN KAYA | |
| **Coordinator of Assessment Unite**  Assist. Prof. Cevdet NACAR | | **Coordinator of Student Exchange Programs**  Assist. Prof. Can ERZİK | |
| **Vice-Chief Coordinators** | | | |
| **Program**  Prof. Oya ORUN | **Assessment**  Prof. Hasan R. YANANLI | | **Students’ Affairs**  Assist. Prof. Can ERZİK |
| **Chief Coordinator (Pre-Clinical Education)**  Prof. Serap ŞİRVANCI | | **Coordinator of Medical Education Program Evaluation and Development Commission**  Prof. Harika ALPAY | |
| **Vice Dean (Education)**  Assoc. Prof. Altuğ ÇİNÇİN & Prof. Hasan R. YANANLI | | **Dean**  Prof. Ümit Süleyman ŞEHİRLİ | |

|  |
| --- |
| MU MEDICAL SCHOOL PRE-CLINICAL EDUCATION PROGRAM |
| LEARNING OUTCOMES / COMPETENCIES   1. Clinical Care: Qualified patient care and community oriented health care 2. Basic clinical skills 3. The organization and management of the patient and the patient care 4. The organization and the management of health care delivery services / system 5. Health promotion and disease prevention 6. Medical Knowledge and Evidence-Based Medicine 7. Appropriate information retrieval and management skills 8. The integration of knowledge, critical thinking and evidence-based decision making 9. Scientific methods and basic research skills 10. Professional Attitudes and Values 11. Communication skills and effective communication with patients / patient relatives 12. Interpersonal relationships and team working 13. Ethical and professional values, responsibilities 14. Individual, social and cultural values and responsibilities 15. Reflective practice and continuing development 16. Healthcare delivery systems, management and community oriented health care 17. 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 |

|  |  |  |
| --- | --- | --- |
| 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, first year students will   * acquire knowledge related to structural characteristics, functions and regulation of enzymes and coenzymes * understand the ATP synthesis and its effect on metabolic pathways * describe the constituents and reactions of metabolic pathways within the cell * understand membrane structure and its function, physical principles of transport and signaling mechanisms both within and among the cells * 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-1.2 & MODULE-1.2 | | |
| * Biochemistry * Biophysics * Biostatistics * Cardiovascular Surgery * Medical Biology | * Medical Education * Ophtalmology * Physiology * Urology | |
| LECTURERS / TUTORS | | |
| Mustafa AKKİPRİK, Professor of Medical Biology  Saime BATIREL, Assoc. Professor of Biochemistry  Gülnaz Nural BEKİROĞLU, Professor of Biostatistics  Hülya CABADAK, Professor of Biophysics  Özgür Kasımay ÇAKIR, Assoc. Professor of Physiology  Özge EMRE, Instructor of Medical English  Can ERZİK, Assist. Professor of Medical Biology  Günseli Ayşe GARİP İNHAN, Assoc. Professor of Biophysics | Goncagül HAKLAR, Professor of Biochemistry  Betül KARADEMİR, Assoc. Professor of Biochemistry  Cevdet NACAR, Assist. Professor of Biophysics  Nesrin Kartal ÖZER, Professor of Biochemistry  Ahmet Suha YALÇIN, Professor of Biochemistry  Berrak YEĞEN, Professor of Physiology  Alper YILDIRIM, Assoc. Professor of Physiology | |
| READING / STUDYING MATERIALS   * Biochemistry, Stryer, 4th Ed., Freeman * Biochemistry, Zubay, 3rd Ed., WCB * 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 Kitapevi, 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. 3rd Ed., Garland | | |

|  |  |  |  |
| --- | --- | --- | --- |
| SUMMARY OF THE COURSE 1.2 | | | |
| Discipline | **Lecture & Group Discussion** | **Multidisciplinary Lab. & Clinical Skills Lab. &**  **ICP Lab.**  **Practice** | Total |
| Biochemistry | 26 | 9 | 35 |
| Biophysics | 20 |  | 20 |
| Biostatistics | 10 |  | 10 |
| Medical Biology | 4 |  | 4 |
| Physiology | 8 | 2 | 10 |
| Subtotal | 66 | 11 | 79 |
| PBL Module | 8 |  | 8 |
| TOTAL | 74 | 11 | 87 |
| ICP-1: Computer Skills (Students’ Research Activity) |  | 18 | 18 |
| Medical English | 12 |  | 12 |
| TOTAL | **88** | **26** | **117** |

|  |  |  |
| --- | --- | --- |
| **SEVEN WEEK PROGRAM** | | |
|  | **THEORETICAL AND PRACTICAL SESSIONS** | **LECTURER(S)/TUTOR(S)** |
| **Week-1 (06 December - 10 December 2021)** | | |
| **Monday** | **06 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Introduction to the course | Dr. Betül Yılmaz |
| 10:40-11:30 | Introduction to bioelectricity-I | Dr. Cevdet Nacar |
| 11:40-12:30 | Introduction to bioelectricity-I | Dr. Cevdet Nacar |
|  |  |  |
| 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 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **07 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Homeostasis | Dr. Berrak Yegen |
| 10:40-11:30 | Introduction to metabolism and metabolic control | Dr. Betül Yılmaz |
| 11:40-12:30 | Introduction to metabolism and metabolic control | Dr. Betül Yılmaz |
|  |  |  |
| 13:40-14:30 | Transport of substances | Dr. Özgür Kasımay Çakır |
| 14:40-15:30 | Transport of substances | Dr. Özgür Kasımay Çakır |
| 15:40-16:30 | Electrochemical potentials, Nernst potential | Dr. Günseli Ayşe Garip İnhan |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **08 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Overview of glycolysis | Dr. Ahmet Suha Yalçın |
| 10:40-11:30 | Medical English | Dr. Özge Emre |
| 11:40-12:30 | Medical English | Dr. Özge Emre |
|  |  |  |
| 13:40-14:30 | Introduction to bioelectricity-II | Dr. Cevdet Nacar |
| 14:40-15:30 | Introduction to bioelectricity-II | Dr. Cevdet Nacar |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Thursday** | **09 December** |  |
| 08:40-09:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 09:40-10:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 10:40-11:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 11:40-12:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
|  |  |  |
| 13:40-14:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 14:40-15:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 15:40-16:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 16:40-17:30 | ICP-1 First aid & clinical skills lab | ICP Lab. |
| 17:40-18:30 |  |  |
|  |  |  |
| **Friday** | **10 December** |  |
| 08:40-09:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 09:40-10:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 10:40-11:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 11:40-12:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
|  |  |  |
| 13:40-14:30 |  |  |
| 14:40-15:30 | Intercellular communication | Dr. Alper Yıldırım |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Week-2 (13 December - 17 December 2021)** | | |
| **Monday** | **13 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 | Physical characteristics of membrane structure and function | Dr. Cevdet Nacar |
| 11:40-12:30 | Membrane proteins | Dr. Cevdet Nacar |
|  |  |  |
| 13:40-14:30 | Active transport and secondary active transport | Dr. Hülya Cabadak |
| 14:40-15:30 |  |  |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **14 December** |  |
| 08:40-09:30 | Reactions of glycolysis | Dr. Ahmet Suha Yalçın |
| 09:40-10:30 | Reactions of glycolysis | Dr. Ahmet Suha Yalçın |
| 10:40-11:30 | Membrane potentials and action potential | Dr. Günseli Ayşe Garip İnhan |
| 11:40-12:30 | Membrane potentials and action potential | Dr. Günseli Ayşe Garip İnhan |
|  |  |  |
| 13:40-14:30 | Bioelectric potentials | Dr. Berrak Yegen |
| 14:40-15:30 | Bioelectric potentials | Dr. Berrak Yegen |
| 15:40-16:30 | Role of organelles in the metabolism | Dr. Betül Yılmaz |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **15 December** |  |
| 08:40-09:30 | Introduction to statistical analysis | Dr. Gülnaz Nural Bekiroğlu |
| 09:40-10:30 | Sampling, distribution and estimation | Dr. Gülnaz Nural Bekiroğlu |
| 10:40-11:30 | Medical English | Dr. Özge Emre |
| 11:40-12:30 | Medical English | Dr. Özge Emre |
|  |  |  |
| 13:40-14:30 | Reactions of glycolysis | Dr. Ahmet Suha Yalçın |
| 14:40-15:30 | Reactions of glycolysis | Dr. Ahmet Suha Yalçın |
| 15:40-16:30 | Flow of energy in nature, first law of thermodynamics | Dr. Günseli Ayşe Garip İnhan |
| 16:40-17:30 | Flow of energy in nature, first law of thermodynamics | Dr. Günseli Ayşe Garip İnhan |
| 17:40-18:30 |  |  |
|  |  |  |
| **Thursday** | **16 December** |  |
| 08:40-09:30 | **Y2C2 THEORETICAL EXAM** |  |
| 09:40-10:30 |  |
| 10:40-11:30 |  |
| 11:40-12:30 |  |
|  |  |  |
| 13:40-14:30 | Oxidation of lipids | Dr. Saime Batırel |
| 14:40-15:30 | Oxidation of lipids | Dr. Saime Batırel |
| 15:40-16:30 | The second law of thermodynamics, entropy, free energy | Dr. Günseli Ayşe Garip İnhan |
| 16:40-17:30 | The second law of thermodynamics, entropy, free energy | Dr. Günseli Ayşe Garip İnhan |
| 17:40-18:30 |  |  |
|  |  |  |
| **Friday** | **17 December** |  |
| 08:40-09:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 09:40-10:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 10:40-11:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 11:40-12:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
|  |  |  |
| 13:40-14:30 |  |  |
| 14:40-15:30 | Coupling of biological reactions with high energy metabolite | Dr. Hülya Cabadak |
| 15:40-16:30 | Coupling of biological reactions with high energy metabolite | Dr. Hülya Cabadak |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Week-3 (20 December - 24 December 2021)** | | |
| **Monday** | **20 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 |  |  |
| 10:40-11:30 | What is probability and probability distribution? | Dr. Gülnaz Nural Bekiroğlu |
| 11:40-12:30 | Bayes’ Theorem | Dr. Gülnaz Nural Bekiroğlu |
|  |  |  |
| 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 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **21 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 |  |  |
| 10:40-11:30 | Tricarboxylic acid cycle and hexose monophosphate shunt | Dr. Goncagül Haklar |
| 11:40-12:30 | Tricarboxylic acid cycle and hexose monophosphate shunt | Dr. Goncagül Haklar |
|  |  |  |
| 13:40-14:30 | Principles of statistical analysis | Dr. Gülnaz Nural Bekiroğlu |
| 14:40-15:30 | Elements of statistical interference | Dr. Gülnaz Nural Bekiroğlu |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **22 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 |  |  |
| 10:40-11:30 | Medical English | Dr. Özge Emre |
| 11:40-12:30 | Medical English | Dr. Özge Emre |
|  |  |  |
| 13:40-14:30 | PBL study time |  |
| 14:40-15:30 | PBL-1 |  |
| 15:40-16:30 | PBL-1 |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Thursday** | **23 December** |  |
| 08:40-09:30 | Physiology LAB: Cell Physiology-Group A | Multidisciplinary Lab. |
| 09:40-10:30 | Physiology LAB: Cell Physiology-Group A | Multidisciplinary Lab. |
| 10:40-11:30 | Physiology LAB: Cell Physiology-Group B | Multidisciplinary Lab. |
| 11:40-12:30 | Physiology LAB: Cell Physiology-Group B | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Electron transport chain | Dr. Goncagül Haklar |
| 14:40-15:30 | Electron transport chain | Dr. Goncagül Haklar |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Friday** | **24 December** |  |
| 08:40-09:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 09:40-10:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 10:40-11:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 11:40-12:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
|  |  |  |
| 13:40-14:30 | PBL study time |  |
| 14:40-15:30 | PBL-2 |  |
| 15:40-16:30 | PBL-2 |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Week-4 (27 December - 31 December 2021)** | | |
| **Monday** | **27 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 |  |  |
| 10:40-11:30 | Physiology LAB: Cell Physiology-Group C | Multidisciplinary Lab. |
| 11:40-12:30 | Physiology LAB: Cell Physiology-Group C | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Physiology LAB: Cell Physiology-Group D | Multidisciplinary Lab. |
| 14:40-15:30 | Physiology LAB: Cell Physiology-Group D | Multidisciplinary Lab. |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **28 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Biochemistry LAB: Electron Transport Chain-Group A | Multidisciplinary Lab. |
| 10:40-11:30 | Biochemistry LAB: Electron Transport Chain-Group A | Multidisciplinary Lab. |
| 11:40-12:30 | Biochemistry LAB: Electron Transport Chain-Group A | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Biochemistry LAB: Electron Transport Chain-Group B | Multidisciplinary Lab. |
| 14:40-15:30 | Biochemistry LAB: Electron Transport Chain-Group B | Multidisciplinary Lab. |
| 15:40-16:30 | Biochemistry LAB: Electron Transport Chain-Group B | Multidisciplinary Lab. |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **29 December** |  |
| 08:40-09:30 | Energetics of electron transport | Dr. Hülya Cabadak |
| 09:40-10:30 | Free energy and thermodynamic properties of water | Dr. Günseli Ayşe Garip İnhan |
| 10:40-11:30 | Medical English | Dr. Özge Emre |
| 11:40-12:30 | Medical English | Dr. Özge Emre |
|  |  |  |
| 13:40-14:30 | PBL study time |  |
| 14:40-15:30 | PBL-3 |  |
| 15:40-16:30 | PBL-3 |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Thursday** | **30 December** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Biochemistry LAB: Electron Transport Chain-Group C | Multidisciplinary Lab. |
| 10:40-11:30 | Biochemistry LAB: Electron Transport Chain-Group C | Multidisciplinary Lab. |
| 11:40-12:30 | Biochemistry LAB: Electron Transport Chain-Group C | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Biochemistry LAB: Electron Transport Chain-Group D | Multidisciplinary Lab. |
| 14:40-15:30 | Biochemistry LAB: Electron Transport Chain-Group D | Multidisciplinary Lab. |
| 15:40-16:30 | Biochemistry LAB: Electron Transport Chain-Group D | Multidisciplinary Lab. |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
|  |  |  |
| **Friday** | **31 December** |  |
| 08:40-09:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 09:40-10:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 10:40-11:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 11:40-12:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
|  |  |  |
| 13:40-14:30 |  |  |
| 14:40-15:30 |  |  |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Week-5 (03 January - 07 January 2022)** | | |
| **Monday** | **03 January** |  |
| 08:40-09:30 | Biochemistry LAB: Anaerobic Glycolysis-Group A | Multidisciplinary Lab. |
| 09:40-10:30 | Biochemistry LAB: Anaerobic Glycolysis-Group A | Multidisciplinary Lab. |
| 10:40-11:30 | Biochemistry LAB: Anaerobic Glycolysis-Group A | Multidisciplinary Lab. |
| 11:40-12:30 | Biochemistry LAB: Anaerobic Glycolysis-Group A | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Biochemistry LAB: Anaerobic Glycolysis-Group A | Multidisciplinary Lab. |
| 14:40-15:30 | Biochemistry LAB: Anaerobic Glycolysis-Group A | Multidisciplinary Lab. |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **04 January** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Importance of genome projects in medicine | Dr. Mustafa Akkiprik |
| 10:40-11:30 | Oxidative Phosphorylation | Dr. Goncagül Haklar |
| 11:40-12:30 | Oxidative Phosphorylation | Dr. Goncagül Haklar |
|  |  |  |
| 13:40-14:30 | Testing statistical hypothesis | Dr. Gülnaz Nural Bekiroğlu |
| 14:40-15:30 | Types of errors in statistical inference | Dr. Gülnaz Nural Bekiroğlu |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **05 January** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 |  |  |
| 10:40-11:30 | Medical English | Dr. Özge Emre |
| 11:40-12:30 | Medical English | Dr. Özge Emre |
|  |  |  |
| 13:40-14:30 | PBL study time |  |
| 14:40-15:30 | PBL-4 |  |
| 15:40-16:30 | PBL-4 |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
|  |  |  |
| **Thursday** | **06 January** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Biochemistry LAB: Anaerobic Glycolysis-Group B | Multidisciplinary Lab. |
| 10:40-11:30 | Biochemistry LAB: Anaerobic Glycolysis-Group B | Multidisciplinary Lab. |
| 11:40-12:30 | Biochemistry LAB: Anaerobic Glycolysis-Group B | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Biochemistry LAB: Anaerobic Glycolysis-Group B | Multidisciplinary Lab. |
| 14:40-15:30 | Biochemistry LAB: Anaerobic Glycolysis-Group B | Multidisciplinary Lab. |
| 15:40-16:30 | Biochemistry LAB: Anaerobic Glycolysis-Group B | Multidisciplinary Lab. |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Friday** | **07 January** |  |
| 08:40-09:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 09:40-10:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 10:40-11:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 11:40-12:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
|  |  |  |
| 13:40-14:30 |  |  |
| 14:40-15:30 | Biosynthesis of lipids-1 | Dr. Nesrin Kartal Özer |
| 15:40-16:30 | Biosynthesis of lipids-1 | Dr. Nesrin Kartal Özer |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Week-6 (10 January - 14 January 2022)** | | |
| **Monday** | **10 January** |  |
| 08:40-09:30 | Biochemistry LAB: Anaerobic Glycolysis-Group C | Multidisciplinary Lab. |
| 09:40-10:30 | Biochemistry LAB: Anaerobic Glycolysis-Group C | Multidisciplinary Lab. |
| 10:40-11:30 | Biochemistry LAB: Anaerobic Glycolysis-Group C | Multidisciplinary Lab. |
| 11:40-12:30 | Biochemistry LAB: Anaerobic Glycolysis-Group C | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Biochemistry LAB: Anaerobic Glycolysis-Group C | Multidisciplinary Lab. |
| 14:40-15:30 | Biochemistry LAB: Anaerobic Glycolysis-Group C | Multidisciplinary Lab. |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **11 January** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Biosynthesis of lipids-2 | Dr. Nesrin Kartal Özer |
| 10:40-11:30 | Biosynthesis of lipids-2 | Dr. Nesrin Kartal Özer |
| 11:40-12:30 | Genome of mitochondria | Dr. Can Erzik |
|  |  |  |
| 13:40-14:30 | Difference between parametric and nonparametric methods; Introduction to parametric methods | Dr. Gülnaz Nural Bekiroğlu |
| 14:40-15:30 | One sample t-test, unpaired t-test and paired t-test | Dr. Gülnaz Nural Bekiroğlu |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **12 January** |  |
| 08:40-09:30 | Gluconeogenesis and glycogen metabolism-1 | Dr. Nesrin Kartal Özer |
| 09:40-10:30 | Gluconeogenesis and glycogen metabolism-1 | Dr. Nesrin Kartal Özer |
| 10:40-11:30 | Medical English | Dr. Özge Emre |
| 11:40-12:30 | Medical English | Dr. Özge Emre |
|  |  |  |
| 13:40-14:30 | Applications of recombinant DNA technology in medicine | Dr. Mustafa Akkiprik |
| 14:40-15:30 | Applications of recombinant DNA technology in medicine | Dr. Mustafa Akkiprik |
| 15:40-16:30 |  |  |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Thursday** | **13 January** |  |
| 08:40-09:30 |  |  |
| 09:40-10:30 | Biochemistry LAB: Anaerobic Glycolysis-Group D | Multidisciplinary Lab. |
| 10:40-11:30 | Biochemistry LAB: Anaerobic Glycolysis-Group D | Multidisciplinary Lab. |
| 11:40-12:30 | Biochemistry LAB: Anaerobic Glycolysis-Group D | Multidisciplinary Lab. |
|  |  |  |
| 13:40-14:30 | Biochemistry LAB: Anaerobic Glycolysis-Group D | Multidisciplinary Lab. |
| 14:40-15:30 | Biochemistry LAB: Anaerobic Glycolysis-Group D | Multidisciplinary Lab. |
| 15:40-16:30 | Biochemistry LAB: Anaerobic Glycolysis-Group D | Multidisciplinary Lab. |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Friday** | **14 January** |  |
| 08:40-09:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 09:40-10:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 10:40-11:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
| 11:40-12:30 | ICP-1 Communication Skills and Introduction to Medical Interview | ICP Lab. |
|  |  |  |
| 13:40-14:30 |  |  |
| 14:40-15:30 | Gluconeogenesis and glycogen metabolism-2 | Dr. Nesrin Kartal Özer |
| 15:40-16:30 | Gluconeogenesis and glycogen metabolism-2 | Dr. Nesrin Kartal Özer |
| 16:40-17:30 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Week-7 (17 January - 21 January 2022)** | | |
| **Monday** | **17 January** |  |
| 08:40-09:30 |  |  |
| 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 |  |  |
| 17:40-18:30 | Elective course |  |
| 18:40-19:30 | Elective course |  |
|  |  |  |
| **Tuesday** | **18 January** |  |
| 08:40-09:30 |  |  |
| 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 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Wednesday** | **19 January** |  |
| 08:40-09:30 |  |  |
| 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 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Thursday** | **20 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 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |
| **Friday** | **21 January** |  |
| 08:40-09:30 |  |  |
| 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 |  |  |
| 17:40-18:30 |  |  |
|  |  |  |