

## COMMITTEE COURSE CONTENT

**University:** Muğla Sıtkı Koçman University  
**Faculty:** Faculty of Medicine/ **Program:** English Program  
**Academic Year:** 2023-2024  
**Phase:** 1/ **Comitee:** 3 (Cell Sciences)  
**Course Code:** MED 1300/ **ECTS:** 9/ **Theoric+Practice Lesson +Laboratory Lesson**  
**Course Type :** Compulsory/ **Course Length :** 8 weeks/ **Type of Teaching :** Formal/ **Language of Instruction :** English

### **Anatomy (MED 1008)**

#### **Theoretical:**

1. Bones of upper extremity I (2 hour)
2. Bones of upper extremity II (2 hour)
3. General information about the bones (2 hour)
4. Introduction to anatomy (1 hour)
5. Joints of the lower extremity I (3 hour)
6. Joints of the lower extremity II (3 hour)
7. Terminology (2 hour)
8. Terms of Anatomical positions, planes, axis (1 hour)
9. Terms of the movement ,Anatomical terms of movement (1 hour)
10. The bones of the lower extremity I (2 hour)
11. The bones of the lower extremity II (2 hour)
12. The term commonly used in medicine (A-K) (2 hour)
13. The term commonly used in medicine (L-Z) (2 hour)

#### **Practical:**

1. Bones of upper extremity (2 hour)
2. Joints of the upper extremity (4 hour)
3. Laboratory presentation (1 hour)
4. The bones of the lower extremity (2 hour)

### **Biophysics (MED 1006)**

#### **Theoretical:**

1. Bioelectrical current and electrical safety (2 hour)
2. Bioelectrical events on muscles and EMG (2 hour)
3. Compound Action Potential (2 hour)
4. Equivalent Circuits for cell membrane (1 hour)
5. Hodgkin-Huxley Action Potential (1 hour)
6. Introduction to Biophysics,concept of system and bioenergetics (1 hour)
7. Ion channels and HH channel model (1 hour)
8. Ions, electrical and chemical gradients (1 hour)
9. Muscle contraction: Biomechanics and bioenergetics relations (3 hour)
10. Nernst and Goldman equations (1 hour)
11. Subthreshold events and action potential (1 hour)
12. Transport mechanisms across cell membrane and resting potential (1 hour)
13. Voltage-gated ion channels (1 hour)

#### **Practical:**

- 1.

### **Biostatistics (MED 1018)**

#### **Theoretical:**

1. Chi-square test (1 hour)
2. Correlation and regression (1 hour)
3. General review (1 hour)
4. Hypothesis tests comparing two sample means (1 hour)
5. Hypothesis tests introduction an done sample test (1 hour)

6. Nonparametric tests (1 hour) 7. One-way ANOVA (1 hour) 8. SPSS practice (1 hour) <b>Practical:</b> 1.
<b>Medical Biochemistry (MED 1001)</b> <b>Theoretical:</b> <ol style="list-style-type: none"> <li>1. Biosynthesis of Fatty Acids (2 hour)</li> <li>2. Cholesterol metabolism (2 hour)</li> <li>3. Degradation of Proteins, Detoxification of Ammonia &amp; Urea synthesis (2 hour)</li> <li>4. Disorders of Lipid Metabolism (2 hour)</li> <li>5. Enzyme activity Assay (2 hour)</li> <li>6. Enzyme kinetics (Enzyme inhibition) (4 hour)</li> <li>7. Enzymes &amp; Classification (2 hour)</li> <li>8. Fatty Acids and Derivatives (2 hour)</li> <li>9. Hemoglobin - Myoglobin (4 hour)</li> <li>10. Ketone bodies (2 hour)</li> <li>11. Lipid transport and deposition (2 hour)</li> <li>12. Lipids - Classification -Chemical Structures (2 hour)</li> <li>13. Oxidation of Fatty Acids (2 hour)</li> <li>14. Peptide Bond and Peptide Plane Primary, secondary, tertiary, quaternary structures of Proteins. (4 hour)</li> <li>15. Posttranslational Modifications of Proteins (2 hour)</li> <li>16. Protein synthesis (4 hour)</li> </ol> <b>Practical:</b> <ol style="list-style-type: none"> <li>1. Case (Lipid metab. Disorders) (2 hour)</li> <li>2. Lipid Assay Methods (2 hour)</li> <li>3. Protein Assay Methods (2 hour)</li> </ol>
<b>Medical Biology (MED 1017)</b> <b>Theoretical:</b> <ol style="list-style-type: none"> <li>1. DNA repair mechanism (4 hour)</li> <li>2. Human genome organization and genome project (2 hour)</li> <li>3. Mendel's law and pedigree (2 hour)</li> <li>4. Mutation and Mutagens (2 hour)</li> <li>5. Nonmendelian inheritance (2 hour)</li> </ol> <b>Practical:</b> <ol style="list-style-type: none"> <li>1. Karyotype analysis (2 hour)</li> </ol>
<b>Medical Genetics (MED 1016)</b> <b>Theoretical:</b> <ol style="list-style-type: none"> <li>1. Common autosomal and gonosomal syndromes (2 hour)</li> <li>2. Numerical and structural chromosomal abnormalities (1 hour)</li> <li>3. Prenatal diagnosis (2 hour)</li> <li>4. Single gene Disorders (1 hour)</li> </ol> <b>Practical:</b> <ol style="list-style-type: none"> <li>1.</li> </ol>
<b>Professional Skills (MED 1013)</b> <b>Theoretical:</b> <ol style="list-style-type: none"> <li>1.</li> </ol> <b>Practical:</b> <ol style="list-style-type: none"> <li>1. Doctor-patient Communication Skills (2 hour)</li> <li>2. Physical Examination Methods (2 hour)</li> </ol>
<b>Social Responsibility Project (MED 1019)</b> <b>Theoretical:</b> <ol style="list-style-type: none"> <li>1. Social Responsibility Project (15 hour)</li> </ol> <b>Practical:</b> <ol style="list-style-type: none"> <li>1.</li> </ol>
<b>Other:</b>

**1.**

**Non- Comitee Courses:**

1. Ataturk's Principles and History of Revolution (ATB 1801) (14 hour)
2. Turkish Language and Literature (TDB 1801) (11 hour)
3. Occupational Health and Safety (İSG 1809) (2 hour)
4. Foreign Language (YDB 1831) (24 hour)
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