



**AYDIN ADNAN MENDERES UNIVERSITY**  
**AYDIN VOCATIONAL SCHOOL OF HEALTH SERVICES**  
**MEDICAL SERVICES AND TECHNIQUES**  
**MEDICAL LABORATORY TECHNIQUES**  
**COURSE INFORMATION FORM**

|  |  |              |            |        |                                  |          |   |            |   |
|--|--|--------------|------------|--------|----------------------------------|----------|---|------------|---|
| Course Title                                     | Medical Laboratory and Safety  |              |            |        |                                  |          |   |            |   |
| Course Code                                      | TL103  | Course Level |            |        | Short Cycle (Associate's Degree) |          |   |            |   |
| ECTS Credit                                      | 2  | Workload     | 50 (Hours) | Theory | 2                                | Practice | 0 | Laboratory | 0 |
| Objectives of the Course                         | To take personal precautions, to identify the risks of physical, chemical and biological factors and to take proper precautions for them while working in the laboratory   |              |            |        |                                  |          |   |            |   |
| Course Content                                   | Use hazard signs in laboratory, Use the cabinets of biological safety, Take precautions against hazards by chemical, radioactive or in effective materials that are spilled on the body, Store the chemical matters, Take precautions for the hazards in result of bacteriologic material spills , Create a laboratory safety committee. |              |            |        |                                  |          |   |            |   |
| Work Placement                                   | N/A  |              |            |        |                                  |          |   |            |   |
| Planned Learning Activities and Teaching Methods | Explanation (Presentation), Discussion, Case Study, Individual Study   |              |            |        |                                  |          |   |            |   |
| Name of Lecturer(s)                              | Ins. Nimet KILIÇ   |              |            |        |                                  |          |   |            |   |

#### Assessment Methods and Criteria

| Method              | Quantity | Percentage (%) |
|---------------------|----------|----------------|
| Midterm Examination | 1        | 40             |
| Final Examination   | 1        | 60             |

#### Recommended or Required Reading

|   |  |
|---|--|
| 1 | 1. Canel,M.(2003),Laboratuvar Güvenliği, A.Ü.Fen.Fak.Yayınları, Ankara Laboratuvar Klavuzları Uygulama |
|---|--|

| Week | Weekly Detailed Course Contents |   |
|------|---------------------------------|---|
| 1    | Theoretical                     | Use hazard signs in laboratory<br>To use gadgets designed to prevent laboratory hazards   |
| 2    | Theoretical                     | Use the cabinets of biological safety   |
| 3    | Theoretical                     | Use laboratory clothings<br>Take precautions for the risks against eyes<br>Take precautions for the risks against needle stings                             |
| 4    | Theoretical                     | Take precautions against hazards by chemical, radioactive or ineffective materials that are spilled on the body   |
| 5    | Theoretical                     | Store the chemical matters<br>Use hazardous chemical matters  |
| 6    | Theoretical                     | Transfer various chemical matters<br>Prevent the hazards in result of chemical matter spills  |
| 7    | Theoretical                     | Take fire precautions in laboratory<br>Take electrical hazard precautions in laboratory   |
| 8    | Theoretical                     | Midterm exam  |
| 9    | Theoretical                     | Take radioactive matter hazard precautions in laboratory<br>Take precautions for the risks against natural disasters such as earthquakes, floods etc.       |
| 10   | Theoretical                     | Take precautions for the hazards in result of bacteriologic material spills<br>Take precautions for the hazards in result of virus included material spills |
| 11   | Theoretical                     | Take precautions for the possible bugs and rodents in laboratory  |
| 12   | Theoretical                     | Create a laboratory safety committee  |
| 13   | Theoretical                     | Set up a telephone network system for the possible laboratory hazards<br>Make plans of extraordinary cases  |
| 14   | Theoretical                     | Prepare a list of control for chemical factors<br>Prepare a list of control for physical factors  |



|    |             |  |
|----|-------------|--|
| 15 | Theoretical | Prepare a list of control for biological factors |
|----|-------------|--|

| Workload Calculation                  |          |             |          |                |
|---------------------------------------|----------|-------------|----------|----------------|
| Activity                              | Quantity | Preparation | Duration | Total Workload |
| Lecture - Theory                      | 14       | 1           | 2        | 42             |
| Midterm Examination                   | 1        | 3           | 1        | 4              |
| Final Examination                     | 1        | 3           | 1        | 4              |
| Total Workload (Hours)                |          |             |          | 50             |
| [Total Workload (Hours) / 25*] = ECTS |          |             |          | 2              |

\*25 hour workload is accepted as 1 ECTS

| Learning Outcomes |   |
|-------------------|---|
| 1                 | 1. Identify the chemical hazards in laboratory and take precautions   |
| 2                 | 2. Identify the physical hazards in laboratory and take precautions   |
| 3                 | 3. Identify the biological hazards in laboratory and take precautions |
| 4                 | 4. Make safety organizations in laboratory                            |
| 5                 | May write laboratory safety instructions                              |

| Programme Outcomes (Medical Laboratory Techniques) |   |
|--|---|
| 1  | To be able to have sufficient back ground in medical laboratory techniques and medical laboratory branches (biochemistry, microbiology, parasitology, sitogenetiketc.);the ability to use theoretical and practical knowledge in these fields.                              |
| 2  | To be able to have the basic theoretical and practical knowledgeand other resources have been supported applications and tools based on secondary-level qualifications gained in the field of Medical Laboratory Techniques Program to-date text boks containing formations |
| 3  | To be able to have basic knowledge about structure and function of systems in human, to analyse these data on tissue, cell and diseases.  |
| 4  | To be able to analyse the medical samples necessary for physicians by using tools, equipment and techniques at the diagnostic and the rapeutic laboratories of health agencies and evaluate the data.   |
| 5  | To be able to use the medical laboratoy tools and equipments according to rules and technics, and make controls and maintenance of them   |
| 6  | To be able to perform basic tests of related different medical laboratories, prepare solutions.   |
| 7  | To be able to perform proper sample collection and transport procedures for the medical laboratory tests from the patient.  |
| 8  | To be able to perform preanalytical sample preparation procedure, prepare inspection preparations, perform disinfection and sterilization   |
| 9  | To be able to interpret and evaluate data, define and analyze problems, develop solutions based on research and proofs by using acquired basic knowledge and skills with in the field.  |
| 10   | To be able to have knowledge about work organization and carry out related practice in medical laboratories   |
| 11   | To be able to carry out laboratory safety protocols, take individual safety precaution and create safe laboratory environment.  |
| 12   | To be able to gain the ability to apply by viewing and evaluating the processes related to his/her fields in public and private sector.   |
| 13   | To be able to gain the awareness of the necessity of life long learning, ability to follow developments in science and technology and self-renewal.   |
| 14   | To be able to help laboratory experts and medical scientists for their researches   |
| 15   | To be able to be aware of individual and public health, environmental protection and job security issues, under standing the basic level of the relationship.   |
| 16   | To be able to grasp principles of Atatürk and there volutions, to ensurenational, ethical, spiritual and cultural values, to adopt to universal and contemporary developments   |
| 17   | To be able to communicate efficiently for medical service and speak Turkish efficiently.  |
| 18   | To be able to communicate in English at basic level, utilize foreign language on occupational practice  |

**Contribution of Learning Outcomes to Programme Outcomes** 1:Very Low, 2:Low, 3:Medium, 4:High, 5:Very High

|    | L1 | L2 | L3 | L4 | L5 |
|----|----|----|----|----|----|
| P1 | 4  | 4  | 4  | 4  | 4  |
| P2 | 4  | 4  | 4  | 4  | 4  |
| P3 | 4  | 4  | 4  | 4  | 4  |
| P4 | 4  | 4  | 4  | 4  | 4  |
| P5 | 4  | 4  | 4  | 4  | 4  |
| P6 | 4  | 4  | 4  | 4  | 4  |



|     |   |   |   |   |   |
|-----|---|---|---|---|---|
| P7  | 5 | 5 | 5 | 5 | 5 |
| P8  | 5 | 5 | 5 | 5 | 5 |
| P10 | 4 | 4 | 4 | 4 | 4 |
| P11 | 5 | 5 | 5 | 5 | 5 |
| P13 | 5 | 5 | 5 | 5 | 5 |
| P14 | 5 | 5 | 5 | 5 | 5 |
| P15 | 5 | 5 | 5 | 5 | 5 |

