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| **COURSE IDENTIFICATION FORM** |
| **Course Code and Name:** SM-537 Biochemical and Molecular Tests in the Bacteriological Diagnostic | **Department of :** |
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| **Semester** |

 | **Theoretic Hour** | **Practice Hour** | **Total Hour** | **Credits** | **ECTS** | **Education Language** | **Type: Compulsory Elective** |
| Fall | 2 | 2 | 3 | 3 | 6 | Turkish | Optional |
| **Prerequisite (s)** |  |
| **Instructor** | Prof. Dr. Azime KÜÇÜKGÜL | **Mail : akucukgul@munzur.edu.tr** **Web :** |
| **Course Assistant** |  | **Mail :****Web :** |
| **Groups / Classes** |  |  |
| **Course Aim** | The aim of the course is to enable bacteriology, the importance of microorganisms, location in fish diseases, basic biochemical and molecular techniques and information about the use of these techniques |
| **Course Goals** | * Basic bacteriological, biochemical and molecular information provision and evaluation of diagnostic methods, laboratory practices and information and interpretation of experimental results.
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| **Course Learning Outs and Proficiencie*s*** | * Will learn the concept of bacteriology, identification of microorganisms and the importance of microorganisms in fish diseases.
* Will be able to learn morphological recognition of microorganisms using a microscope
* Will be able to learn basic information about the genetics of bacteria
* Will be able to learn and reviews biochemical and molecular techniques

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| **Course Basic and Auxiliary Contexts** | * Gürdöl, F., Ademoğlu, E. 2006. Biyokimya. Nobel Tıp Kitapevi. 880 sf.
* Sienko, Michell J. and Robert A. Plane. 1966. Chemistry: Principles and Properties. McGraw-Hill Book Co., NY. (and other chemistry texts and handbooks)
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| **Methods of Give a Lecture** | Lecture, The relevant notes from application, Question-answer, Discussion, Individual study, Relevant web information |

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| **Assessment Criteria** |  | **If Available, to Sign (x)** | **General Average Percentage (%) Rate** |
| **1. Quiz** | **X** | **40** |
| **2. Quiz** |  |  |
| **3. Quiz** |  |  |
| **4. Quiz** |  |  |
| **5. Quiz** |  |  |
| **Oral Examination** |  |  |
| **Practice Examination (Laboratory, Project etc.)** |  |  |
| **Final Examination** | **X** | **60** |
| **Semester Course Plan** |
| **Week** | **Subjects** |
| **1** | Bacteriology description, identification of microorganisms, and working areas of bacteriology |
| **2** | Introduction and use of the microscope  |
| **3** | The introduction of the morphological characteristics of microorganisms  |
| **4** | Fish diseases caused by microorganisms, the microorganism host interactions and pathogenicity |
| **5** | Genetic materials and structures |
| **6** | Bacterial chromosomes |
| **7** | DNA replication, replication origin and enzymes of replication  |
| **8** | Intermediate exam |
| **9** | Gene regulation and mutations |
| **10** | DNA repair and recombination |
| **11** | Protein synthesis and transformation |
| **12** | Transduction and plasmids |
| **13** | Basic biochemical and molecular methods applied for the diagnosis of fish diseases  |
| **14** | Final exam  |