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| **COURSE IDENTIFICATION FORM** |
| **Course Code and Name:** SM-623 Laboratory and Molecular Techniques in Fish Parasitology | **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 fish parasitology, and life cycle and the etiology of common parasite, basic principles of the samples used in the parasitological study, as well as basic molecular methods the students |
| **Course Goals** | * Parasitic diseases in fish, the life cycle and pathogenicity common parasite, the fish caught and parasitological working principles, applied basic molecular methods for parasitological diagnosis
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| **Course Learning Outs and Proficiencie*s*** | * Will learn introduction fish parasitology, terminology and concepts.
* Will be able to learn and understand their life cycle and etiology, pathogenesis of common fish parasites in fish
* Will be able to learn the basic principles and the samples used in parasitological research
* Will be able to learn and apply the basic molecular methods for parasitological diagnosis
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| **Course Basic and Auxiliary Contexts** | * Buchmann, K., An Introduction To Fish PArasitological Methods, Classical and Molecular Techniques, biofolia Pres, 2007. Roberts, R.J. Fish Pathology, Bailliere Tindall, 1989.
 |
| **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** | Introduction to fish parasitology, terminology and concepts |
| **2** | General information about fish parasites |
| **3** | The life cycles of protozoa, monogenea, digenea, cestoda, nematoda, acanthocephala, crustacea parasites |
| **4** | Ichthyophthrius multifiliis (white spot), Cryptocaryon irritans' s etiology, epizootiology, pathogenicity, clinical and autopsy findings, diagnosis and treatment |
| **5** | Phagocytosis, lysozym, complement, C reactive proteins, transferine, interferon and lectinin |
| **6** | Trichodina spp., Costia spp. Cryptobi spp. and Hexamita spp 's etiology, epizootiology, pathogenicity, clinical and autopsy findings, diagnosis and treatment |
| **7** | The capture of fish, transportation of fish to the laboratory, live fish parasites examination |
| **8** | Intermediate exam |
| **9** | Applications prior parasite fixation |
| **10** | Parasite fixation and storage |
| **11** | Exploration of specific molecules on parasites |
| **12** | The basic molecular methods for parasitological diagnosis |
| **13** | Identification of the parasite by different molecular methods |
| **14** | Final Exam  |