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| **COURSE IDENTIFICATION FORM** | | | | | | | |
| **Course Code and Name:** SM 5085 OSMOREGULATION PHYSIOLOGY IN FISH | | | | **Department of :** Fisheries and Aquaculture | | | |
| |  | | --- | | **Semester** | | **Theoretic Hour** | **Practice Hour** | **Total Hour** | **Credits** | **ECTS** | **Education Language** | **Type: Compulsory Elective** |
| Fall | 3 | 0 | 3 | 3 | 5 | Turkish | Optional |
| **Prerequisite (s)** | | - | | | | | |
| **Instructor** | | Prof. Dr. Volkan KIZAK | | | | **Mail :** volkan.kizak@munzur.edu.tr  **Web :** | |
| **Course Assistant** | | - | | | | **Mail :**  **Web :** | |
| **Groups / Classes** | | Master | | | |  | |
| **Course Aim** | | Description of the osmoregulation physiology in fish, understanding of the mechanism of osmoregulation physiology and comprehension of importance in terms of aquaculture. | | | | | |
| **Course Goals** | | Ability to understand osmoregulation physiology in fish and comprehend the importance of osmoregulation in terms of aquaculture. | | | | | |
| **Course Learning Outs and Proficiencie*s*** | | To be able to describe osmoregulation physiology in fish and its functions, explain its importance, apply in adaptation studies of aqauculture. | | | | | |
| **Course Basic and Auxiliary Contexts** | | 1. Fish Osmoregulation (2007) Eds.; Baldisserotto B., Mancera J.M. and Kapoor B.G., p.527, Science Publishers, USA.  2. Encyclopedia of Aquaculture (2000), Ed.; Stickney R.R., p.1063, John Wiley & Sons, USA.  3. Nitrogen Excretion (2001), Eds.; Wright P. and Anderson P., p.358, Academic Pres, USA. | | | | | |
| **Methods of Give a Lecture** | | Theoretical | | | | | |

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| **Assessment Criteria** | |  | **If Available, to Sign (x)** | **General Average Percentage (%) Rate** |
| **1. Quiz** | **X** |  |
| **2. Quiz** |  |  |
| **3. Quiz** |  |  |
| **4. Quiz** |  |  |
| **5. Quiz** |  |  |
| **Oral Examination** |  |  |
| **Practice Examination (Laboratory, Project etc.)** |  |  |
| **Final Examination** | **X** |  |
| **Semester Course Plan** | | | | |
| **Week** | **Subjects** | | | |
| **1** | Fish anatomy | | | |
| **2** | Fish physiology | | | |
| **3** | Fish systematics | | | |
| **4** | Physiology of osmoregulation in fish | | | |
| **5** | Function of osmoregulation in adaptation to salt water | | | |
| **6** | Effects of physicochemical properties of water on fish | | | |
| **7** | Anadromous and catadromous fish | | | |
| **8** | Smoltification | | | |
| **9** | Euryhaline species | | | |
| **10** | Aquaculture of euryhaline species | | | |
| **11** | Energy metabolism and osmotic adaptation in fish | | | |
| **12** | Ion transfer in cells | | | |
| **13** | The role of hormones in osmoregulation | | | |
| **14** | The importance of osmoregulation physiology in aquaculture | | | |