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| **COURSE IDENTIFICATION FORM** | | | | | | | |
| **Course Code and Name:** SM 5082 INTEGRATED AQUACULTURE SYSTEMS | | | | **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 integrated aquaculture systems, comprehension of importance of these techniques in terms of aquaculture. | | | | | |
| **Course Goals** | | Ability to understand integrated aquaculture systems and their applications in the world, comprehend the importance of these systems in terms of aquaculture, increase efficiency of aquaculture and decrease negative effects of aquaculture on environment. | | | | | |
| **Course Learning Outs and Proficiencie*s*** | | To be able to describe the importance of integrated aquaculture systems and apply in aquaculture, program an environment-friendly production. | | | | | |
| **Course Basic and Auxiliary Contexts** | | 1. Encyclopedia of Aquaculture (2000), Ed.; Stickney R.R., p.1063, John Wiley & Sons, USA. 2. Aquaculture Principles and Practices (2005), Eds.; Pillay T.V.R. and Kutty M.N., p624, Blackwell Publishing, UK | | | | | |
| **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** | The importance of integrated systems in aquaculture | | | |
| **2** | The relationship between aquaculture and the environment | | | |
| **3** | Sustainable aquaculture | | | |
| **4** | Pollution sources | | | |
| **5** | Impact of effluents on the environment | | | |
| **6** | Efficiency-enhancing environmental methods | | | |
| **7** | Recirculating aquaculture systems | | | |
| **8** | Fish and algae integrated aquaculture systems | | | |
| **9** | Integrated multi-trophic aquaculture | | | |
| **10** | Beneficial microorganisms in sustainable aquaculture | | | |
| **11** | Fish and poultry integrated aquaculture systems | | | |
| **12** | Aquaponic systems-I | | | |
| **13** | Aquaponic systems-II | | | |
| **14** | Utilization of fish feces as fertilizer | | | |