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| **COURSE IDENTIFICATION FORM** |
| **Course Code and Name:**  SM-5097 Microbial Degradation of Fisheries and Quality Analysis | **Department of :**  Fisheries Post Graduate |
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| **Semester** |

 | **Theoretic Hour** | **Practice Hour** | **Total Hour** | **Credits** | **ECTS** | **Education Language** | **Type: Compulsory Elective** |
| Fall | 2 | 2 | 4 | 3 | 6 | Turkish | Optional |
| **Prerequisite (s)** |  |
| **Instructor** | Professor Dr. Gülderen KURT KAYA | **Mail : gkurtkaya@munzur.edu.tr****Web :** |
| **Course Assistant** |  | **Mail :****Web :** |
| **Groups / Classes** | Post Graduate |  |
| **Course Aim** | Microbial spoilage of seafood products and all quality control analysis methods applied in seafood products will be explained |
| **Course Goals** | * To be able to define the development of microbiology and the important bacteria, yeasts and molds in foods
* To be able to list the sources of microbial contamination and factors affecting microbiological growth in aquaculture
* Explain the chemical changes caused by microorganisms
* To be able to evaluate microbiological counting methods and results in fresh and processed seafood
* To be able to identify the forms of microbial spoilage of seafood
* To be able to explain the preservation methods of aquaculture products against microorganisms
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| **Course Learning Outs and Proficiencie*s*** | * Microbial spoilage of seafood
* Teaching the quality analyzes to be applied to fish
* Important quality parameters for the crustacean class
* Analysis methods in processed seafood
 |
| **Course Basic and Auxiliary Contexts** | * Forsythe, SJ. 2010 The microbiology of safe food. Wiley – Blackwell Publishing 476p
* Gökoğlu N. 2002 Su Ürünleri İşleme Teknolojisi. Su Vakfı Yayınları, İstanbul. ISBN 975-9703-48-3. 157s.
* Gorga, C. Ronsivalli, L.J., (1988). Quality Assurance of Seafoods. Van Nostrand Reinhold Company, New York.
* Haard,N., (2002). The role of enzymes in deterining seafood color, flavor an texture. In:
* Bremmer,A.H (ed.) Safety and Qality Issues in Fish Processing. Woodhead Publishing Limited and CRC Pres LLC, pp:220-253
* MARTINSDǾTTIR, E., (2002). Quality management of stored fish.

Bremmer,A.H (ed.) Safety and Qality Issues in Fish Processing. Woodhead Publishing Limited and CRC Pres LLC NESVADBA, P., (2003). |
| **Methods of Give a Lecture** | Lecture, Question and answer, Discussion, Brainstorming, Individual work |

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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 of food microbiology laboratory and points to be considered, application |
| **2** | The importance of seafood infections and toxications. Definition and taxonomy of microorganisms. |
| **3** | Sources of contamination of microorganisms to seafood, microorganisms that can cause deterioration in seafood |
| **4** | Internal and external factors affecting the growth of microorganisms, inhibitory substances |
| **5** | Indicator microorganisms and their importance |
| **6** | Definition, classification and preparation of microbial media |
| **7** | Isolation and identification of bacteria |
| **8** | Midterm Exam |
| **9** | Control of microorganisms in raw and processed products, barriers technology and its importance |
| **10** | Microbial quality control in fresh, chilled fish, application |
| **11** | Microbial quality control in frozen fish, application |
| **12** | Microbial quality control in canned fish, application |
| **13** | Microbial quality and control of marinades, application |
| **14** | Final Exam |