**COURSE IDENTIFICATION FORM**

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| Course Unit Title and Code: SM-651 Microbiology in fishery | Programme Title: Fisheries Doctorate |
| Semester | The Methods of Education (ECTS) |  |
| Theoretical | Practice | Lab. | Project Work | Other | Total | ECTS |
|  | 2 | 2 | - |  |  | 4 | 6 |
| Language of Course Unit  | Turkish |
| Type of Course Unit (Compulsory/Elective) | Elective |
| Preconditions | None |
| Name of Lecturer | Assoc. Dr. Engin ŞEKER |
| Class | Doctorate |
| Objectives of Course Unit | It is aimed to teach students general traits of microorganism, microbial metabolism, growth conditions, counting microorganism and isolation |
| Teaching Techniques  | Lecture, question and answer, discussion, brain storming, individual work |
| Course Unit Contents | Introduction to microbiology, history, classification and naming of microorganisms, general characteristics and morphology of microorganism and reproduction, medium, metabolism, virulence and pathogenic traits, microscope, staining method, the basic rules of microbiology laboratory and taking microbiological sample.

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| Recommended or Required Reading | Arda, M. (2001) Temel Mikrobiyoloji. Medisan Yayınları, AnkaraKılıçturgay K, Gökırmak F, Töre O, Gedikoğlu S, Göral G, Helvacı S. Klinik Mikrobiyoloji. 2nd ed. Güneş ve Nobel Kitapevleri: Bursa (1994) |
| Learning Outcomes | 1. Can make preliminary preparation for microbiological analysis
2. Can take sample from fisheries for microbiological analysis
3. Can practice the methods of preparing fluid solid and medium
4. Can make microscopic studies.
5. Can have knowledge about microbiological counting method
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| Weekly Detailed Course Contents | 1. The definition, content and history of microbiology2. The cytochemistry3. The classification of microorganism(prokaryote)4. The classification of microorganism(prokaryote)5. Learning of microbiology laboratory rules, equipment of laboratory, methods of taking sample6. The classification of microorganism: Fungus7.Mid-term exam8. The classification of microorganism :Algae, protozoan, virus9. Identifing and preparing medium 10. Feeding forms and food need of microorganism 11. Usage of microscope and staining methods12. Growing conditions and reproduction of microorganism13. Preparing dilution liquid and methods of making microbiological culture, the study of microorganism by microscope14. Final exam |
| The contribution to Career Training of Course Unit | Mathematic and Basic Science | Vocational Education | General Education |
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### RELATIONSHIPS BETWEEN LEARNING OUTCOMES OF COURSE UNIT AND PROGRAMME OUTCOMES OF FISHERIES ENGINEER

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|  | 1. PROGRAMME OUTCOMES OF FISHERIES ENGINEER
 | Contribution Level1 Low2: Medium 3: High |
| 1 | Deepens and improves the information based on university education up to expertise level in Fishing and Seafood Processing Technology.  | 3 |
| 2 | Collects, assesses and publishes data related to their expertise area, cares public, scientific, cultural and ethical values during data collection. | 2 |
| 3 | Solves problems by using problem-solving and suitable methods, establishes cause and effect relationships in the process in his/her expertise. | 2 |
| 4 | Develops a positive attitude towards lifelong learning.  | 1 |
| 5 | Ability for independent study in their area of expertise. | 2 |
| 6 | Obtaining and using literature in their area of expertise. | 0 |
| 7 | Written, verbal and visual convey of their studies and developments in their area of expertise. | 0 |
| 8 | Comprehends interaction of expertise area in relation to interdisciplinary relationships.  | 1 |

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| Learning Outcomes of Course Unit | Programme Outcomes |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 1 | 3 |  | 3 | 2 |  |  |  |  |
| 2 | 3 |  | 3 | 3 |  |  |  | 3 |
| 3 | 3 | 2 | 3 | 3 |  |  |  | 1 |
| 4 | 3 | 3 |  | 3 |  |  | 2 | 2 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
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| Total PO | 12 | 5 | 9 | 11 | 0 | 0 | 2 | 6 |
| Total/12 | %100 | %42 | %75 | %92 | %0 | %0 | %17 | %50 |
| Contribute level | 3 | 2 | 3 | 3 | 0 | 0 | 1 | 2 |

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| Assoc. Dr. Engin ŞEKER | 12.02.2024 |