**COURSE IDENTIFICATION FORM**

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| Course Unit Title and Code: SM-525 Estimation methods of fish stock | Programme Title: Fisheries Post Graduate |
| Semester | The Methods of Education (ECTS) |  |
| Theoretical | Practice | Lab. | Project Work | Other | Total | ECTS |
|  | 2 | 2 | - |  |  |  | 6 |
| Languish of Course Unit  | Turkish |
| Type of Course Unit (Compulsory/Elective) | Elective |
| Preconditions | None |
| **Name of Lecturer** | Prof. Dr. Fahrettin YÜKSEL |
| Class | Post Graduate |
| Objectives of Course Unit | The main objectives of this course are to be learning of the concept of fish population structures and dynamics; sampling methods and obtaining data from specimens; data arrangement and selecting statistical methods; taxonomic and abundance analysis; growth models; reproduction and feeding biology; determination of the stock size in Inland waters; Comparison methods of parametric and non parametric data. |
| **Teaching Techniques**  | Lecture, question and answer, discussion, brain storming, individual work |
| **Course Unit Contents** | The concepts of population structure and population dynamics; Sampling planning, passive and active fishing techniques, fixation methods; Obtaining metric and meristic data; Data arranging and choice of statistical methods used in the analysis; Taxonomic analysis; Analysis of fish abundance, distribution, length, weight and length-weight relationship; Length and weight related indices; Growth models; Determining of sexual maturity and reproductive period, fecundity analysis; Recruitment analysis; Feeding types of food and feeding analysis; Tagging and marking techniques; Stock assessment methods; Determination of mortality rates; Comparison of parametric and non-parametric data |
| Recommended or Required Reading | Murphy B.R., Willis, D.V. (1996). Fisheries Techniques, American Fisheries Society. Bethesda, Maryland. Ricker, W.E. (1975). Computation and Interpretation of Biological Statistics of Fish Population., Bull. Fish. Res. Board Can. 191. Krebs, C.J. (1989). Ecological Methodology. Harper Collins Publishers, New York. Summerfelt, R.C, Hall, G.E. (1987). Age and Growth of Fish. Iowa State University Press. Gulland, J.A. (1991). Fish Population Dynamics. John Wiley & Sons, New York. Potts, G.W., Wootton, R.J. (1989). Fish Reproduction: Strategies and Tactics. Academic Press, London. |
| Learning Outcomes | 1. Fish sampling methods and planning.
2. Obtaining data from specimens, data arrangement and selecting statisitcal methods used.
3. Determination of the stock size in Inland Waters.
4. Comparison methods.
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| Weekly Detailed Course Contents | 1. The concepts of population structure and population dynamics; Sampling planning, passive and active fishing techniques, fixation methods
2. Obtaining metric and meristic data
3. Data arranging and choice of statistical methods used in the analysis
4. Taxonomic analysis; Analysis of fish abundance, distribution, length, weight and length-weight relationship
5. Length and weight related indices
6. Growth models
7. Growth models
8. Mid-Term exam
9. Determining of sexual maturity and reproductive period; Fecundity analysis
10. Recruitment analysis
11. Tagging and marking techniques
12. Stock assessment methods
13. Determination of mortality rates
14. Comparison of parametric and non-parametric data
15. Final Exam
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| The contribution to Career Training of Course Unit | Mathematic and Basic Science | Vocational Education | General Education |
|  |  | 6 |  |

### RELATİONSHIPS BETWEEN LEARNING OUTCOMES OF COURS UNIT AND PROGRAMME OUTCOMES OF FİSHERİES ENGİNNER

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|  | PROGRAMME OUTCOMES OF FİSHERİES ENGİNNER | **Contribution Level**1 Low2: Medium 3: High |
| 1 | Deepens and improves the information based on university education up to expertise level in Fishing and Seafood Processing Technology.  | 2 |
| 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. | 0 |
| 4 | Develops a positive attitude towards lifelong learning.  | 1 |
| 5 | Ability for independent study in their area of expertise. | 3 |
| 6 | Obtaining and using literature in their area of expertise. | 3 |
| 7 | Written, verbal and visual convey of their studies and developments in their area of expertise. | 2 |
| 8 | Comprehends interaction of expertise area in relation to interdisciplinary relationships.  | 0 |

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