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| **COURSE IDENTIFICATION FORM** |
| **Course Code and Name:**SM-513 Nutritional Requirements in Finfish and Feed Preparation | **Department of :**Fisheries M.Sc. |
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| **Semester** |

 | **Theoretic Hour** | **Practice Hour** | **Total Hour** | **Credits** | **ECTS** | **Education Language** | **Type: Compulsory Elective** |
|  | 2 | 2 | 3 | 3 | 5 | Turkish | Optional |
| **Prerequisite (s)** | None |
| **Instructor** | Prof. Dr. Durali DANABAŞ | **Mail : ddanabas@munzur.edu.tr****Web :** |
| **Course Assistant** |  | **Mail :****Web :** |
| **Groups / Classes** |  |  |
| **Course Aim** | The aim of this course is to provide learning of fish feeding and nutrition determination of finfish species in culture stages that are ones of the most important points in aquaculture and preparation of suitable feed contents and formulations. |
| **Course Goals** | It will be explained importance of fish feeding, nutritional requirements of freshwater and sea finfish species; feed raw materials and rations and feed preparation. |
| **Course Learning Outs and Proficiencie*s*** | 1. He will be able to grip importance of fish feeding.  1.1. He knows importance of fish feeding.  1.2. He grips its place in aquaculture. 2. He will be able to learn nutritional requirements of freshwater and sea finfish species. 2.1. He knows the nutritional requirements in feed of freshwater and sea finfish species.  2.2. He compares culture of different fish species. 3. He will be able to know feed raw materials and rations. 3.1. He dominates feed raw materials and feed rations in feeding.  3.2. He prepares feed rations.v |
| **Course Basic and Auxiliary Contexts** | * Alpbaz, A., 2005. Su Ürünleri Yetiştiriciliği. Alp Yayınları, Bornova, İzmir, 548s.
* Atay, D., 1994. Deniz Balıkları ve Üretim Tekniği. Ankara Üniversitesi Ziraat Fakültesi, Yayın No:1352, Ders Kitabı:392, Ankara, 316s.
* Dikel, S., 2005. Kafes Balıkçılığı. Çukurova Üniversitesi Su Ürünleri Fakültesi Yayınları, Yayın No:18, Adana, 213s.
* Dikel, S., 2009. Tilapia Yetiştiriciliği. T.C. Gıda, Tarım ve Hayvancılık Bakanlığı Tarımsal Üretim ve Geliştirme Genel Müdürlüğü Yayınları, Ankara, 250s.
* Emre, Y., Kürüm, V., 2007. Havuz ve Kafeslerde Alabalık Yetiştiriciliği. Posta Basım, İstanbul, 272s.
* Hoşsu, B., Korkut, A.Y., Kop, A.F., 2008. Balık Besleme ve Yem Teknolojisi I (Balık Besleme Fizyolojisi ve Biyokimyası). Ege Üniversitesi Yayınları, Su Ürünleri Fakültesi Yayın No: 50, Ders Kitabı Dizin No:19, İzmir, 276s.
* Hoşsu, B., Korkut, A.Y., Kop, A.F., 2008. Balık Besleme ve Yem Teknolojisi II (Laboratuvar Uygulamaları ve Yem Yapım Teknolojisi). Ege Üniversitesi Yayınları, Su Ürünleri Fakültesi Yayın No: 54, Ders Kitabı Dizin No:23, İzmir, 320s.
* Sarıhan, E., 1995. Balık Üretimi. Çukurova Üniversitesi Ziraat Fakültesi Ders Kitabı No:39, Adana, 210s.
* Tekelioğlu, N., 2005. İç Su Balıkları Yetiştiriciliği. Adana Nobel Kitabevi Yayınları, Adana, 278s.
* Tekelioğlu, N., 1998. Deniz Balıkları Yetiştiriciliği, Baki Kitabevi Yayınları, Adana, 226s.
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| **Methods of Give a Lecture** | Lecture, Question and answer, Discussion, Brain storming, 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** | 1. Week: Present status and importance of aquaculture in our country, Importance of fish feeding,
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| **2** | 1. Week: Feeding behavior and feed intake in fish, Gastrointestinal system and digestion of nutrition, Larval development and digestion physiology,
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| **3** | 1. Week: Proteins, Their properties and kinds, Essential and unessential amino acids,
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| **4** | 1. Week: Lipids, Their properties and kinds, Fatty acids and properties,
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| **5** | 1. Week: Carbohydrates, Their properties and kinds,
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| **6** | 1. Week: Vitamins, Water-soluble vitamins, Lipid-soluble vitamins,
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| **7** | 1. Week: Minerals, Their properties and kinds,
 |
| **8** | 1. Week: Vise,
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| **9** | 1. Week: Trout and culture, Their nutritional requirements, Raw materials providing these requirements, Investigation of academic article,
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| **10** | 1. Week: Common carp and tilapia and their culture, Their nutritional requirements, Raw materials providing these requirements, Investigation of academic article,
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| **11** | 1. Week: Gilthead seabream and culture, Their nutritional requirements, Raw materials providing these requirements, Investigation of academic article,
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| **12** | 1. Week: Seabass and culture, Their nutritional requirements, Raw materials providing these requirements, Investigation of academic article,
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| **13** | 1. Week: Alternative finfish species in our country and their culture, Their nutritional requirements, Raw materials providing these requirements, Investigation of academic article,
 |
| **14** | 1. Week: Feed raw materials, Feed formulations, Methods of feed preparation,
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