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**Department of Department of Fish Resource and Aquatic Animal**

**College of Agriculture**

**University of Salahaddin**

**Subject: Fish Diseases**

**Course Book – (Year 3)**

**Lecturer's name: Mrs. Mehraban jalal aaaaakukha ali**

**Academic Year: 2017/ 2018**

**Course Book**

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| **1. Course name** | Fish Diseases | |
| **2. Lecturer in charge** | Mrs. Mehraban jalal Kukha Ali | |
| **3. Department/ College** | Department of Fish Resource and Aquatic Animal/ Agriculture | |
| **4. Contact** | **e-mail:** [**mehraban.kukha@su.edu.krd**](mailto:mehraban.kukha@su.edu.krd)  **Tel: 009647504909343** | |
| **5. Time (in hours) per week** | Practical: 3 | |
| **6. Office hours** | 3 hours/Week | |
| **7. Course code** | **-** | |
| **8. Teacher's academic profile** | I gained MSc Degree disemember 2015in Fish Biology at the University of Kahramanmaraş Sütçü İmam / Turkey.  I have got a BSc in 2005 in Animal Resources Agriculture College University of Salahaddin-Erbil, Kurdistan Region of Iraq. I employed in 2006 in Agriculture College. In 2018 I started to work as a Lecturer in Animal Resources Department and gave a lecture to undergraduate students (1st, 2nd and 3td year). | |
| **9. Keywords** | Fish, Diseases, Virus, Bacteria, fungi. | |
| **10. Course overview:**  Main aim of the course is to furnish to the student a good knowledge about diseases of fish, with main reference to pathogenesis, external symptoms, Clinical Signs, transmission, prevention and control for each group of diseases. Furthermore the student will acquire practical skills on diagnosis of main diseases of aquatic animals. | | |
| **11. Course objective:**   * To train students on issues of diseases of commercial fish species in Kurdistan region, including diagnosis, identification of microorganisms, therapy and prevention. * To establish a basic knowledge about principles of fish diseases and to create an interest in this science. * To prepare a good background of information necessary for upper division courses and later careers. * To encourage the development of inductive and deductive reasoning and to promote better study and test-taking skills necessary for this and other courses. | | |
| **12. Student's obligation**  The student’s attendance the class, exams and seminars and other activity like collecting sample. | | |
| **13. Forms of teaching**  The use of the following methods in the teaching process:   1. Data Show 2. Presentation 3. Course book 4. Lecturer Bound 5. Patient Magic 6. Description and goals 7. Lectures slides 8. Laboratory handouts 9. Assignments 10. Grading scale | | |
| **14. Assessment scheme**  I assessments the student through attendance in the class, course exams, quizzes and seminars or presentation the subjects that have relations with the fishes and collecting diseases of fish samples. ‌ | | |
| **15. Student learning outcome:**  The students learn different important things about the fish diseases, as learn the preparation the slides to identification some diseases, learn the importance of fish diseases identification in Kurdistan region and Iraq. | | |
| **16. Course Reading List and References‌:**  To prepare the subjects I using text book, as  Amlacher, E. (1970). Textbook of fish diseases (Engl. Transl.). T. F. H. Publ., Jersey city: 302pp.  Dujin, Van C., Jnr. (1973). Diseases of fishes, 3rd edn., lliffe Books, London: 372pp.  Mhaisen, F. T. (1980). Fish parasitology in Iraq. Basrah Nat. Hist. Mus. Publ. No. 3: 36pp. + IXpls.  Paperna, I. (1996). Parasites, infections and diseases of fishes in Africa- An update. C.I.F.A. Tech. Pap., No.31. Rome, FAO: 220pp.  Hoole, D. and D. Bucke, D. (2001). Diseases of carp and other cyprinid fishes. Fishing News Books, Osney Mead, Oxford: 280pp.  Woo, P. T. K. (2006). Fish Diseases and Disorders, Vol. 1: protozoan and metazoan infections. 2nd Edn. CAB International, London. 791pp. | | |
| **17. The Topics:** | | Lecturer's name |
| |  |  | | --- | --- | |  | Definition of diseases  Health  Healthy person (fish)  Types of diseases  -Infection diseases  -Non-infection diseases  Important of study of fish diseases | |  | Terminology of epidemiology  Epidemiologic triad  Degree of Infection | |  | Disease Transmission  Stress in fishes | |  | External examination of the diseased fish  External symptoms  Biopsy Procedures  Necropsy or autopsy Procedure | |  | Viral diseases | |  | Bacterial diseases | |  | Fungi diseases | |  | Dietary deficiency | |  | Hereditary diseases | |  | Environmental diseases | | |  |
| 18. Practical Topics (If there is any) | |  |
| Example for each viral, bacteria, fungi, non-infection diseases | |  |
| 19. Examinations:  For the exam uses the traditional system, and include different questions as true and false, blanks, define, describe and identify the fish parasite diseases. | | |
| 20. Extra notes:  This subjects need field trips to identify some diseases which infect the fishes and fine the new recording of diseases especially in our city. | | |
| 21. Peer review پێداچوونه‌وه‌ی هاوه‌ڵ  This course book has to be reviewed and signed by a peer. The peer approves the contents of your course book by writing few sentences in this section.  (A peer is person who has enough knowledge about the subject you are teaching, he/she has to be a professor, assistant professor, a lecturer or an expert in the field of your subject).  ئه‌م کۆرسبووکه‌ ده‌بێت له‌لایه‌ن هاوه‌ڵێکی ئه‌کادیمیه‌وه‌ سه‌یر بکرێت و ناوه‌ڕۆکی بابه‌ته‌کانی کۆرسه‌که‌ په‌سه‌ند بکات و جه‌ند ووشه‌یه‌ک بنووسێت له‌سه‌ر شیاوی ناوه‌ڕۆکی کۆرسه‌که و واژووی له‌سه‌ر بکات.  هاوه‌ڵ ئه‌و که‌سه‌یه‌ که‌ زانیاری هه‌بێت له‌سه‌ر کۆرسه‌که‌ و ده‌بیت پله‌ی زانستی له‌ مامۆستا که‌متر نه‌بێت.‌‌ | | |