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

**College of Agriculture**

**University of Salahaddin**

**Subject: Fish Parasitology**

**Course Book – (Year 3)**

**Lecturer's name: Dr. Shamall Mohammad Amin Abdullah**

**Academic Year: 2017/ 2018**

**Course Book**

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| **1. Course name** | Fish Parasitology | |
| **2. Lecturer in charge** | Dr. Shamall Mohammad Amin Abdullah | |
| **3. Department/ College** | Department of Fish Resource and Aquatic Animal/ Agriculture | |
| **4. Contact** | e-mail: shamall\_m\_a\_abdullah@yahoo.com  Tel: 009647504640675 | |
| **5. Time (in hours) per week** | Practical: 2 | |
| **6. Office hours** | 20-25 hrs. | |
| **7. Course code** | **-** | |
| **8. Teacher's academic profile** | I graduate from Mosul University in 1985 (Ranked 6th in collage).  In 1990 I finished my M.Sc. degree in Salahaddin University, and start as Assistant Lecturer, in Parasitology, Department of Biology, College of Education, Salahaddin University, teaching practical Parasitology, invertebrate, Zoology and Chordate.  In 2002 I finished my PhD degree in in Parasitology, Department of Biology, College of Education (Ibn Al-Haitham), University of Baghdad, Iraq.  In 2010 Professor of Fish Parasitology. Department of Biology, College of Education, University of Slahaddin, Iraq.  In 2014 Professor of Fish Parasitology. Department of Fish Resource and Aquatic Animal, College Agriculture, University Salahaddin- Erbil- Iraq. | |
| **9. Keywords** | Fish, Parasite, Protozoa, Monogenea, Trematoda, Cestoda, Nematoda, Acanthocephala, Crustacea | |
| **10. Course overview:**  Main aim of the course is to furnish to the student a good knowledge about parasitic diseases of fish, with main reference to pathogenesis, external symptoms, Clinical Signs, transmission, prevention and control for each group of parasites. Furthermore the student will acquire practical skills on diagnosis of main parasitic 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 parasitology 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 parasites of fish samples. ‌ | | |
| **15. Student learning outcome:**  The students learn different important things about the fish parasites, as learn the preparation the slides to identification some parasite, learn the importance of fish parasite 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.  Belding, D. L. (1965). Textbook of parasitology. 3rd edn. Appleton-Century-Crofts, NewYork: 1374pp.  Bykhovskaya-Pavlovskaya, I. E.; Gusev, A. V.; Dubinia, M. N.; Izyumova, N. A.; Smirnova, T. S.; Sokolovskaya, I. L.; Shtein, G. A.; Shul'man, S. S. and Epshtein, V. M. (1962). Key to parasites of freshwater fish of the U. S. S. R. Akad. Nauk, S. S. S. R., Moscow: 727pp. (In Russian).  Dujin, Van C., Jnr. (1973). Diseases of fishes, 3rd edn., lliffe Books, London: 372pp.  Hoffman, G. L.(1998) . Parasites of North American freshwater fishes, 2nd edn. Cornell Univ. Press, London: 539pp.  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 |
| Introduction to Parasitology  Types of parasite  Types of host  Relishap between the parasites and hosts  Protozoa  Monogenea  Trematoda  Cestoda  Nematoda  Acanthocephala  Crustacea | |  |
| **18. Practical Topics (If there is any)** | |  |
| Example for each protozoans, monogeneans, trematodes, cestodes, nematodes, acanthocephalans, crustaceans | |  |
| **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 specimens. | | |
| **20. Extra notes:**  This subjects need field trips to identify some parasites which infect the fishes and fine the new recording of parasites 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.‌‌ | | |