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**Department of Animal Resources**

**College of Agriculture**

**University of Salahaddin–Erbil**

**Subject: Reproductive Physiology and Artificial Insemination (Theory)**

**Course Book – Third Class**

**Lecturer's name: Dr. Edres A.Hamadamen (PhD)**

**Academic Year: 2022/2023**

**Course Book**

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| **1. Course name** | **Reproductive Physiology and Artificial Insemination** |
| **2. Lecturer in charge** | **Dr. Edres A.Hamadamen** |
| **3. Department/ College** | **Agriculture College/Animal Resources Department** |
| **4. Contact** | **e-mail:**  **Tel: (07504627152)** |
| **5. Time (in hours) per week** | **For example Theory: 2**  **Practical: 3** |
| **6. Office hours** | **Available all days during the week** |
| **7. Course code** |  |
| **8. Teacher's academic profile** | **B.Sc. in Animal Resources (1999-2000).**  **M.Sc. in Animal Resources-Reproductive Physiology and Artificial Insemination (2005-2006).**  **PhD in Animal Resources-Reproductive Physiology and Artificial Insemination (2022)** |
| **9. Keywords** | **Animal, Reproductive Physiology, Artificial Insemination.** |
| **10. Course overview:**  Reproduction is a sequence of events beginning with development of the reproductive system in the embryo. After the animal is born, it must grow and achieve puberty by acquiring the ability to produce fertile gametes. This ability must be accompanied by reproductive behaviour and copulation. | |
| **11. Course objective:**  **\***Students to be able to identify the anatomy and physiology of genital organs  \*Student to be able to assess symptoms and characteristics of puberty and estrous cycle of the ruminant animals  \*Easy methods of Artificial Insemination  \*Discuss the phases of pregnancy diagnosis  \*Discuss the stages of parturition | |
| **12. Student's obligation**  The students should be obligated attendance and completion of all tests, exams, quizzes, assignments, reports , essays…etc | |
| **13. Forms of teaching**  1- PowerPoint.  2- Whiteboard.  3- Pictures.  4- video | |
| **14. Assessment scheme**   * **Examinations:-** * 1st exam. After 5 lectures * 2nd exam. After 10 lectures   **Mark Distribution**  **Monthly Exam 40 %( Theoretical 25% (5% quiz) + Practical 15%) +**  **Final Exam 60% (Theoretical 40% + Practical 20%) = Final**  **Mark 100%.** | |
| **15. Student learning outcome:**   * Students to be able to assess symptoms and characteristics of unhealthy animals. * Students to be able to identification of determinants/Risk Factors. * Students to be able to managing the animal field in best hygienic methods to prevent disease outbreak and able to administration drugs and vaccines. | |
| **16. Course Reading List and References‌:**  1-Frandson, R.D. (2003) Anatomy and Physiology of Farm animals, 6th ed. Wolters Kluwer Company. London.  2-Hafez, E.S.E. (2000) Reproduction in Farm Animals.Lea and Fibiger. Philadelphia.  3- Reece, W. O. (1997) Physiology of Domestic Animals, 2nd Ed. Wolters Kluwer Company London.  4- Senger, P.L. (1997) Path ways to Pregnancy and Parturition, 1stEd. Current Conceptions, Inc.  5-Sperlakis, N. and Banks, R.O. (1996) Essentials of Physiology, 2nd ed. Little, Brown and Company. London. | |
| **17. The Topics:** | |

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| **Weekly Lectures schedule** | | | |
|  | ***subjects*** | ***weeks*** |  | |
|  | **Introduction to Reproduction, Anatomy of Male Reproductive System** | **1st week** | 1 | |
|  | **Function of Male Reproductive System** | **2nd week** | 2 | |
|  | **Anatomy of Female Reproductive System** | **3rd week** | 3 | |
|  | **Function of Female Reproductive System** | **4th week** | 4 | |
|  | **The Onset of Puberty, The Ovarian Cycle** | **5th week** | 5 | |
|  | **The Estrous Cycle** | **6th week** | 6 | |
|  | **Fertilization&Implantation** | **7th week** | 7 | |
|  | **Hormones During Pregnancy& Birth** | **8th week** | 8 | |
|  | **Artificial Insemination** | **9th week** | 9 | |
|  | **Reproductive Problems in Bulls** | **10th week** | 10 | |
|  | **Reproductive Problems in Cows** | **11th week** | 11 | |
|  | **Avian Female Reproductive System** | **12th week** | 12 | |
|  | **Avian Male Reproductive System** | **13th week** | 13 | |
|  | **Artificial Insemination in poultry** | **14th week** | 14 | |
|  | **Evaluation of Fertility** | **15th week** | 15 | |

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| **18. Examinations:**  **Q/ Fill in the blanks with suitable word(s)**  **1:** The testis produces spermatozoa and testosterone as well as other substances such as ------------ estrogen and several proteins.  **2:** Corpora lutea are the dominant ovarian structure during the ---------- phase**.**  **Q/Define the followings terms**  Zonapellucida, Isthmus,Diestus, Lactogenesis  **Q/ Function of the followings**  Ductus Defferent, Seminal vesicles, uterus, placenta  **Q/ Answer the followings**  1: Hormones produces by placenta  2: Signs of Estrous  3: stages of parturition  4:Advantages of Artificial Insemination  **Q/ Write the parts of the following diagram**  [Anatomy and physiology of animals Maternal and foetal blood flow in the placenta.jpg](http://commons.wikimedia.org/wiki/File:Anatomy_and_physiology_of_animals_Maternal_and_foetal_blood_flow_in_the_placenta.jpg) |
| **19. 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).* |