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**Department of Animal Resources College of Agriculture**

**Salahaddin university-Erbil**

**Subject: General Genetics Practical**

**Course Book: 1**

**Lecturer's name: MSc. Mohsin Ali Ahmad**

 **Academic Year: 2018/2019**

**Course Book**

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| **Course name** | **Year Course**  |
| **Lecturer in charge** | **Mohsin Ali Ahmad** |
| **Department/ College** | **Animal Resources / College of Agriculture** |
| **Contact** | **e-mail:** agronomist80@gmail.com**Tel: 07504935099** |
| **Time (in hours) per week** | **Practical: 3**  |
| **Office hours** | **2 hours** |
| **Course Description:** This syllabus is for 2nd stage of Fish Resources & Aquatic Animals Dept. which include: practical tissue staining and slide preparation to see of cell division phases , mucus cell staining to see barr body , study of Mendel law problems , sex determination and karyotyping. All lecture will be arranged in 7 lecture and each lecture is full explanation with diagram for better understanding of student during of study.  |
| **Course objective:**Upon completion of this course, the student will be able to describe:The study of cell cycle and cell division The study of chromosomal abnormality and karyotyping The study of human barr bodies The study of Multiple Alleles in blood groups Sex Determination of animals Sex linked inheritance |
| **Student's obligation**The students should be obligated attendance and completion of all tests, exams, quizzes, assignments. |
| **Forms of teaching**This subject somewhat new and complex for our students, we try make our students full understanding by using of power point Data show, white board, video even practice testing. |
| **Assessment scheme*** ‌ **Examinations:-**
* 1st exam. After 4 lectures
* 2nd exam. After 7 lectures

**Mark Distribution** **Monthly Exam 40 %( Theoretical 25% (5% quiz) + Practical 15%) +**  **Final Exam 60% (Theoretical 40% + Practical 20%) = Final** **Mark 100%.**  |
| **Student learning outcome:**1. Application microscope
2. Preparation of microcap slides
3. Staining cells
4. Differentiation between man male and female by barr body
5. How to Classification of chromosomes by karyotyping
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| **Course Reading List and References‌:**1. Internet.
2. Cell and molecular biology, Varma, 2011 , Newdelhi publication
3. Principal of genetics , MALATHI V. , Person publication(2013), Mumbai
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| **Practical Topics**  | **Lecturer's name** |
| **1** | The study of cell cycle and Mitosis cell division phases  | MSc. Mohsin Ali Ahmad |
| **2** | The study of meiosis cell division phases  | MSc. Mohsin Ali Ahmad |
| **3** | The study of human barr bodies | MSc. Mohsin Ali Ahmad |
| **4** | The study of chromosomal abnormality  | MSc. Mohsin Ali Ahmad |
| **5** | **Examination**  |
| **5** | The study of karyotyping | MSc. Mohsin Ali Ahmad |
| **6** | Sex linked inheritance  | MSc. Mohsin Ali Ahmad |
| **8** | The study of Multiple Alleles in blood groups Transfer Methodology | MSc. Mohsin Ali Ahmad |
| **9** | **Examination**  |
| **Examinations:**1. Drawing of picture :

Example : draw and write all mitotic cell division phases ?1. Compete the tables:

Example: complete the following table by genotyping of blood groups? 1. Write the names of following pictures :

Example : write down name of each following mutation types? |
| **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* |