Republic of Iraq
The Ministry of Higher Education & Scientific Research

University: Diyala
College: Agriculture
Department: Animal Production
Stage: Fourth
Name: Khalid Hamid Hassan
Academic Status: Professor
Qualification: PhD.
Place of work:Coll. Of Agriculture

Course Weekly Outline

Course Instructor	Khalid Hamid Hassan				
E_mail	hassan29875@yahoo.com Khaled@agriculture.uodiyala.edu.iq				
Title	Poultry Breeding				
Course Coordinator	First Course				
Course Objective	Teaching and training students on the strategies that used in poultry breeding programs for poultry industry, the theoretical and experimental basis, the renewal of the objectives of the follow-up education programs by and the requirements of the local and global markets variables.				
Course Description	General principles of heredity, genetics of qualitative traits in poultry, genetics of quantitative traits in poultry, estimation of genetic parameters, the traditional tools of poultry breeding programs, recent trends of information optimizing use of molecular techniques and genetic engineering.				
Textbook	Hassan, K. H. 2011. Poultry Breeding . Univ. of Diyala Press. Iraq. Crawford , R.D. 1990. Poultry Breeding and Genetics . Muir , W.M. and S.E., Aggrey .2003. Poultry Genetics , Breeding and Biotechnology.				
References	Many other references and article from internet .				
Course Assessment	Term Tests	Laboratory	Quizzes	Project	Final Exam
	As (25%)	As (10%)	As (5%)	----	As (60%)
General Notes					

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week	Date	Topics Covered	Practical Part
1		Origin of Chickens , development of poultry breeding goals .	Species of poultry , Variety , strains .
2		General principles of heredity, chromosomes in birds, sex determination, sex-linked inheritance, Autosexing.	Modification in Mendelian ratios influenced by epistatic genes and lethal genes, practical process for autosexing.
3		Definition of qualitative traits, and distribution of inheriting feathers, and long of feathers inheritance, the inheritance of histological feathers traits, inheritance of colors of feathers, skin color inheritance	Test Cross, Back Cross , Diallel Cross , examples of the inheritance of qualitative traits in chickens.
4		Definition of quantitative traits, patterns of inheritance, genetic variation, phenotypic variation, the interaction between environment and genetics, resemblance between relatives, calculate the degree of relationship.	Applications in calculating the degree of relationship between relatives and its importance in quantitative genetics.
5		Estimation of genetic parameters, genetic correlation, environment correlation.	Flock pedigree and records
6		Genetic selection, selection for qualitative and quantitative traits, types of selection**.**	Estimation of genetic parameters – Examples.
7		Mating systems, inbreeding, inbreeding coefficient estimation, harmful effects of inbreeding.	Calculating efficiency of selection , Selection index .
8		Out breeding , combining ability	Calculating of inbreeding coefficient
9		Breeding programs for broiler production.	Three way cross , Four way cross in poultry breeding.
10		Breeding programs for egg production.	Egg production measurements, the quality traits for egg selection.
11		Genetic disorders , pattern of inheritance.	Genetic disorders, examples .
12		Genetics of fertility and semen traits.	Measurements and selection for semen traits.
13		Conservation for poultry genetic resources .	Mating methods for pedigree in poultry
14		Genetic engineering in poultry	Artificial insemination in poultry – training
15		DNA markers assistance genetic selection.	General review

Instructor Signature: **Dean Signature:**