Specification for Animal and Poultry Breeding (B)
2025/2026

1-Basic information

Course title	Animal and poultry breeding **(B)**							
Course code	AWD.225							
Department offering the course	Animal Wealth Development							
Level	2nd year							
Semester	Spring							
Number of units/credit hours	Theoretical	1	Practical	1(2)	Other	0	Total	2(3)
Course Type	√ **Obligatory** **Elective**							
Academic program	Bachelor of Veterinary Medicine (BVM)							
University	Benha University							
Faculty	Veterinary medicine							
Name of course coordinator	Prof Dr. Sherif Ramadan							
Course Specification Approval Date	Department council on 8/7/2025							
Course Specification Approval (Attach the decision/minutes of the department /committee/council ....)	Department council on							

2-Course overview

- **Course contents written in the program bylaw:**

Management of commercial poultry breeders; light regime for open and closed poultry house system; principles of quail & ostrich production; Duck, Gees and Turkey production; Rabbit production; fish production.

3- Intended learning outcomes of the course (ILOs):

(NARS)			Course ILOS	
	Code	**Text**	**Code**	**Text**
	2.2	Basics of normal behavior, management,	a1	Explain the principles of population genetics and the frequency of genes in the population

Knowledge and understanding		breeding, veterinary economics and health maintenance of domestic animals, laboratory animals, poultry, and aquatic	a2	Describe the types of traits and the factors influencing their inheritance.
	2.5.	Principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife , poultry and fish	a3	Define the system of mating and understanding the genetic parameters of the population
			a4	Understanding the principles of selection and breeding value
Intellectual skills	4.2	Assess and criticize, at the fundamental level, how data are derived	b1	Determine the types of gene action that affects various economic traits in farm animals.
			b2	Interpret the effect of mating system on production efficiency of the farm.
	4.3	Inculcate a rigorous approach to problem identification and solving.	b3	Estimate the genetic parameters of the populations for genetic evaluation of farm animals
			b4	Critically analyze some of the animal improvement tools that are used , Notwithstanding their limitations.
Professional and practical skills	3.7	Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency.	c1	Asses the relationships and predict the rate of inbreeding for farm animals.
	3.8	Skillfully and appropriately gain and use new information remain current with the emerging biomedical knowledge and therapeutic options.	c2	Apply system of mating and selection tools for improvement of farm animals
			c3	Design the suitable breeding program to achieve the defined breeding goals.
General and transferable skills	5.1	Work under pressure and / or contradictory conditions.	d1	Work under pressure during lab session of animal production
	5.2	Function in a multidisciplinary team	d2	Can work in team manner during any required activity
	5.3	Communicate appropriately verbally and non- verbally.	d3	Communicate effectively with lab collage
	5.4	Organize and control		

		tasks and resources.	d.4	Manipulate and organize tasks
	5.5	Search for new information and technology as well as adopt life–long self learning ethics	d5	Search for new information and technology
	5.6	Utilize computer and internet skills.	d6	Utilize computer and internet skills

4- Teaching and learning methods					
Lectures	√	**Discussion & seminar**	√	**Practical**	√
Presentation & movies	√	**Problem solving**	√	**Brain storming**	√
Others	Field visits				

- Course Schedule:

Number of the Week	**Scientific content of the course (Course Topics)**	**Total Weekly Hours**	**Expected number of the Learning Hours**			
			Theoretical teaching (lectures/discussion groups/ .....)	**Training (Practical/Clinical/ .....)**	**Self-learning (Tasks/ Assignments/ Projects / ...)**	**Other (to be determined)**
W1	Genetic constitution of population.	2(3)	**1**	**1(2)**		**0**
W2	Genetic constitution of population.	2(3)	**1**	**1(2)**		0
W3	Factor affecting gene and genotypic frequencies.	2(3)	**1**	**1(2)**	**Formative quiz**	0
W4	Qualitative and quantitative trait	2(3)	**1**	**1(2)**		0
W5	Variations in economic traits	2(3)	**1**	**1(2)**		0

W6	System of mating (relationship in breeding)	2(3)	**1**	**1(2)**	Formative quiz	0
W7	**Semester work including 1hr exam**	----------				
W8	System of mating (outbreeding and hybrid vigour)_1	2(3)	**1**	**1(2)**		0
W9	System of mating (outbreeding and hybrid vigour)_2	2(3)	**1**	**1(2)**		0
W10	Genetic parameters of population_1	2(3)	**1**	**1(2)**	Formative quiz	0
W11	Genetic parameters of population_2	2(3)	**1**	**1(2)**		0
W12	Principle of selection and genetic improvement of livestock_1	2(3)	**1**	**1(2)**		0
W13	Principle of selection and genetic improvement of livestock_2	2(3)	**1**	**1(2)**		0
W14	Breeding Value	2(3)	**1**	**1(2)**	Formative quiz	0
W15	**Practical exam**	----------				

5- Assessment timing and grading:

a- Assessment methods (summative and formative)

1. **Formative assessment**: including (weekly quizzes, homework assignments and surveys).
2. **Summative assessment** including (quizzes, class activities, 1hr exam, practical exam, oral exams and final written exams).

b- Assessment schedule and weight

Assessment method	Timing	Grade	Percent
Semester work 1hr exam	7^{th} week	10	10%
Formative assessment	Throughout the	---------	--------

	semester		
Practical exam	15th week	30	30%
oral exam	End of semester	10	10%
Written exam	End of semester	50	50%
Assignments / Project /Portfolio/ Logbook	-------	-------	------
Field training	--------	------	-------
Other (Mention)	-------	-------	-------
Total		100	100%

6- Learning resources and supportive facilities:

Learning resources	**Main reference**	**Student handbook**: A concise guide of Animal Production and Breeding edited by animal production members
	Essential books (text books)	• Jerrold Turcotte, Ashok Singh. Principles of Genetics and Animal Breeding. White Press Academic (2020.(• Peinado, Begoña, Laura Almela, Ángel Poto, and Sonia Galián. "Animal breeding and genetics." In International Congress on the Breeding of Sheep and Goats, (2021.(• Samantha Sanders. Understanding Animal Breeding and Genetics. Murphy & Moore Publishing (2022.(• Chandra Vir Singh. Animal Breeding and Genetics. New India Publishing Agency. (2015.(• Spangler, Matthew L. "Animal Breeding and Genetics: Introduction." In Animal Breeding and Genetics, pp. 1-4. New York, NY: Springer US, (2022.(•
	Periodicals, Web sites, . . . etc	• Banha Veterinary Medical journal. • (Egyptian Veterinary Medical association. • Zagazig Veterinary journal • Indian veterinary journal • www.ekb.eg
	Learning platform	Thinqi
supportive	**Devices &**	**Devices:**

facilities	**instruments**	• Thermal cycler • Laminar Air Flow • Vortex • Microscope • Centrifuge • Automatic Egg Incubator • Microbiological Incubator • Magnetic stirrer • Water Distillator • Horizontal Electrophoresis • Vertical Electrophoresis • Ordinary Centrifuge • Water bath • Digital balance • Microwave • **Instruments:** • Slides • Cover slides • Jars • Pipettes
		1. Data show. 2. White board. 3. Department laboratory 4. Faculty education farm. 5. Faculty of agriculture farms 6. Central laboratory

Matrices:

A- Content and ILOs matrix:

B-

Topics	Knowledge and understanding	Intellectual skills	Professional and practical	General and transferable
Genetic constitution and factors	**a1, a2,**	**b1,**	**c1,**	**d1,d5**

affecting gene and genotypic frequencies of population.				
Variations in economic traits	**a1, a2,**	**b1,**	**c1,**	**d1,d6**
Relationship and inbreeding	**a3,**	**b2, b4,**	**c1, c3,**	**d1,d3,**
Outbreeding and hybrid vigour	**a3,**	**b2, b4,**	**c2, c3,**	**d1, d3,**
Genetic parameters of population	**a3,**	**b3, b4,**	**c2, c3,**	**d2, d3,**
Selection and genetic improvement of livestock	**a4,**	**b4,**	**c2, c3,**	**d2, d3,d4**
Estimation of breeding value	**a4,**	**b4,**	**c3,**	**d2, d3,d4**

B- Teaching, learning and assessment methods:

ILOs		Teaching and Learning methods						
		L	P&M	D	P	Ps	Bs	FV
Knowledge and understanding	a1	√						√
	a2	√						√
	a3	√						√
	a4	√						√
Intellectual skills	b1	√		√				
	b2	√		√		√		
	b3	√		√		√		
	b4	√		√		√		
Professional and practical skills	c1				√		√	
	c2				√		√	
	c3				√		√	
General skills	d1	√	√			√		
	d2	√		√	√			√
	d3	√	√	√	√	√	√	
	d4	√	√	√	√	√	√	
	d5	√	√	√	√	√	√	
	d6	√	√	√	√	√	√	

L **: Lecture,** P&M**: Presentations & Movies,** D&S: **Discussions & Seminars PT: Practical,** Ps: **Problem solving,** Bs: **Brain storming,** FV**: field visit**

C- Assessment methods and ILOS:

ILOs		assessment method				
		Formative	Semester work (1hr exam)	oral	practical	written
Knowledge and understanding	a1		√	√		√
	a2		√	√		√
	a3		√	√		√

	a4		√	√		√
Intellectual skills	b1	√	√	√		√
	b2	√	√	√		√
	b3	√	√	√		√
	b4	√	√	√		√
Professional and practical skills	c1				√	
	c2				√	
	c3				√	
General skills	d1	√		√		
	d2	√		√		
	d3	√		√		
	d4	√		√		
	d5	√		√		
	d6	√		√		

Course coordinator: Prof Dr. Sherif Ramadan
Head of department: Prof Dr. Sherif Ramadan
-Program coordinator: Prof. Dr. Mahmoud Abouelroos