Specification for Animal, poultry and fish nutrition and malnutrition disease (A) course

1-Basic information

1	**Course title**	Animal, Poultry and fish nutrition and malnutrition diseases (A)							
2	**Course code**	NCN.316							
3	**Department/s participating in delivery of the course**	Nutrition and Clinical nutrition							
4	**Number of hours**	Theoretical	2	Practical	1(2)	Other	0	Total	3(4)
5	**Course Type**	√ Obligatory Elective							
6	**level**	3rd year							
7	**Semester**	Fall semester							
8	**Academic program**	Bachelor of Veterinary medicine (BVM)							
9	**Faculty**	Veterinary medicine							
10	**University**	Benha University							
11	**Name of course coordinator**	Ass.Prof. Ahmed Elsayed Shehab							
12	**Course Specification Approval Date**	Faculty council/ 27-8-2025							
13	**Course Specification Approval (Attach the decision/minutes of the department /committee/council ....)**	Department council/ 8-7-2025							

2-Course overview

- **Course contents written in the program bylaw:**
  Principles of nutrition and vet. Dietetics; chemical composition and evaluation of feed stuffs; assimilation and utilization of nutrients. Nutrient's inadequacy; feeding standards and nutrients requirements. Applied nutrition for maintenance. Poultry, rabbits, fish and other aquatic animals. Classification of feedstuffs; feed supplements & additives. Feed processing. Commercial feeds and feed laws.

3- Course Learning Outcomes CLOs

	(NARS) outcomes		Course outcomes	
	Code	**Text**	**Code**	**Text**
Knowledge and understanding	2.5	Principle of welfare, production and health maintenance of food producing and pet animals, sporting animals, wildlife , poultry and fish	a1	Define basics of animal nutrition.
	2.6	Basics of nutrition and feeding practices of healthy and diseased animals.	a2	Record the basic knowledge about function, sources and deficiency diseases of nutrients.
			a3	Describe the basic knowledge about the nutrient requirements of different animal species and its relation with the suitable feedstuffs.
			a4	Understand the proper use of different feed stuffs in the local environment to achieve maximum animal production
Intellectual skills	4.3	Inculcate a rigorous approach to problem identification and solving.	b1	Interpret the fitness of feed stuff for animal feeding.
			b2	Apply the best method of animal feeding to achieve maximum production and least cost of ration
	4.5	Remain committed to life – long learning and updating / upgrading their biochemical sense and clinical skills	b3	Plan to solve problems associated with animal feeding.

Professional and practical skills	3.1	Employ all the gained knowledge and understanding in clinical practice in a skillful pattern	c1	Solve nutritional problems and suggestions to improve the production ability of an animal enterprise
	3.7	Assess and advise about animal management, nutrition under conditions of health and disease, and reproductive efficiency.	c2	Evaluate the problems of feed preparation and explain the methods of solving in quick and reliable manner.
	3.9	Conduct evidence-based problem-solving of field–presented problems tasks	c3	Perform and practices the best and reliable method of ration formulation
General skills	5.1	Work under pressure and / or contradictory conditions	d1	Work under pressure during nutrition lab cession
	5.4	Organize and control tasks and resources.	d2	Manipulate and organize tasks
	5.5	Search for new information and technology as well as adopt life–long self- learning ethics.	d3	Search for new information in field of nutrition
	5.6	Utilize computer and internet skills	d4	Utilize computer and internet skills, read paper via internet in field of nutrition

4- Teaching and learning methods					
Lectures	√	Discussion &	√	Practical	√

		seminar			
Presentation & movies	√	Problem solving	√	Brain storming	√
Others					

- 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	Water	3(4)	2	1(2)		0
W2	Protein 1	3(4)	2	1(2)		0
W3	Protein 2	3(4)	2	1(2)	Formative quiz	0
W4	Carbohydrates	3(4)	2	1(2)		0
W5	Lipids	3(4)	2	1(2)		0
W6	Water soluble vitamins 1	3(4)	2	1(2)	Formative quiz	0
W7	Semester work (one hour exam)	-	-	-		-
W8	Fat soluble vitamins 1	3(4)	2	1(2)		0
W9	Fat soluble vitamins 2	3(4)	2	1(2)		0

W10	Minerals 1	3(4)	2	1(2)	Formative quiz	0
W11	Minerals 2	3(4)	2	1(2)		0
W12	Feed Additives 1	3(4)	2	1(2)		0
W13	Feed Additives 2	3(4)	2	1(2)		0
W14	Technical Terms & Feed Evaluation	3(4)	2	1(2)	Formative quiz	0
W15	Practical exam	-				-

5- Methods of students' assessment

a- Assessment methods (summative and formative)

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

b- Assessment schedule and weight

Assessment method	**Assessment Timing (Week Number)**	**Marks/ Scores**	**Total course Marks percentage**
Semester work including one hour exam	6th week	10	10%
Formative assessment	Throughout the semester	-----	------
Practical exam	14th 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, Edited by Staff members.
	Essential books (text books)	• Basic Animal Nutrition and Feeding *(W.G. Pond; D.C. Church; K.R. Pond,).* • Animal Nutrition *(P. McDonald).* • Nutrient Requirements of Domestic Animals published by *National Research Council* (NRC). • Vitamins in Animal Nutrition *(Lee Russell McDowell).* • Laboratory Manual for Nutrition Research *(Gopal Krishna and S.K.han).*
	Periodicals, Web sites, . . . etc	• Journal of American Veterinary Medical Association. • Nutritional Abstract and Review • Veterinary Bulletin. • Archives of Animal Nutrition
	Learning platform	Thinqi
supportive facilities	**Devices & instruments**	Muffle furnace Centrifuge Hot air oven Ph meter Sterilizer Ph apparatus KJELDAHL apparatus WEENDES apparatus Soxtherm Computer Printer Deep freezer
		1. Data show 2. White board

		3. Facilities of Student Nutritional Laboratory 4. Small Unit of Feed Preparation 5. Computer lab and internet connection. 6. Unit for experimental and lab animals.

Matrices:

A- Content and ILOs matrix:

Content	ILOs			
	Knowledge and understanding	Intellectual	Professional and Practical	General and transferable
Water	a1	b1	-	d1-d2-d3-d4
Protein	a1 - a3	b1	c1-c2-c3-c4	d1-d2-d3-d4
Carbohydrates	a2-a2- a3	b1- b2	c1-c2-c3-c4	d1-d2-d3-d4
Lipids	a1-a2-a4	-b3	c1-c2-c3-c4	d1-d2-d3-d4
Water-Soluble Vitamins	a1-a2- a3	b1- b3	c1-c2-c3-c4	d1-d2-d3-d4
Fat-Soluble Vitamins	a1-a2- a3	b1 -b3	c1-c2-c3-c4	d1-d2-d3-d4
Minerals	a1-a2- a3	b1 -b3	c1-c2-c3-c4	d1-d2-d3-d4
Technical Terms	a1	-	-	d1-d2-d3-d4
Feed Evaluation	a4	b1	-	d1-d2-d3-d4
Classifications of Feedstuffs	-a2-a4	b1- b2 -b3	c1-c2-c3-c4	d1-d2-d3-d4

B- Teaching and learning methods and ILOs matrix:

ILOs		Teaching and Learning methods					
		L	P&M	D	P	Ps	Bs
Knowledge and understanding	a1	√			√	√	
	a2	√			√	√	
	a3	√			√	√	
	a4	√			√	√	
Intellectual skills	b1			√	√		
	b2			√	√		
	b3			√	√		
	b4				√		
Professional and practical skills	c1	√			√		√
	c2	√			√		√
	c3	√			√		√
	c4	√			√		√
General skills	d1		√				
	d2	√	√	√		√	
	d3	√	√	√	√	√	√
	d4	√	√	√		√	√

L: Lecture, P&M: Presentations & Movies, D&S: Discussions & Seminars P: Practical Ps: Problem solving, Bs: Brain storming.

C- Assessment methods and ILOs matrix:

ILOs		assessment method				
		Formative assessment	semester	oral	practical	written
Knowledge and understanding	a1	√		√		√
	a2	√		√		√
	a3	√		√		√
	a4	√		√		√
Intellectual skills	b1		√	√		√
	b2	√	√	√		√
	b3	√	√	√		√
	b4	√	√	√		√
Professional and practical skills	c1				√	
	c2				√	
	c3				√	
	c4				√	
General skills	d1			√	√	
	d2		√	√	√	
	d3		√	√	√	
	d4		√	√		

Course Coordinator: Ass.Prof. Ahmed Elsayed Shehab

Program coordinator: Prof. Dr. Mahmoud Abouelroos