







Course Specification of Fish Breading and Diseases

	I. Course Identification and Gen	neral Info	ormation:			
1	Course Title:	F	Fish Breading and Diseases			
2	Course Number & Code:		F	PA575		
		С.Н				
3	Credit hours:	Theor etic al	Practi cal	Traini ng	Semin ar	Tot al
		2	1			3
4	Study level/ semester at which this course is offered:	fifth year / first semester				
5	Pre –requisite (if any):	M]	[351, MI3	53, MI355	5, MI357	
6	Co –requisite (if any):			Non		
7	Program (s) in which the course is offered:	Bachelor of Veterinary medicine			•	
8	Language of teaching the course:	English / Arabic				
9	Location of teaching the course:	Faculty of Veterinary medicine				
1	Prepared by:	Professor. Dr. Fawzi Elsagheer			•	
1	Date of approval:					

II. Course description:

This course aims to provide the student with basic knowledge, concepts and information about infectious and non-infectious diseases in fish and the different and

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modern methods and their diagnosis, as well as identifying the natural composition of the fish body and the external characteristics and internal anatomy of fish species and identifying ways to care for fish in fish farming systems in ponds as well as the development and care of fish Decorations

III. Intended learning outcomes (ILOs) of the course:				
(A) Know	ledge and Understand	ding	;• ;•	
Alignment of	Course Intended Learning Outcomes Knowledge		os) to Program Intended Lear Understanding.	rning Outcomes (PILOs) in:
Program Intended Learning Outcomes (Sub- PILOs) in: Knowledge and Understanding After completing this program, students will be able to: After completing this program, students will be able to: After completing this program, students will be able to:				
animal epidem diagno and life	ies various causes of diseases, animal nics and how they can be sed; including common e-threatening diseases of s, poultry and fish.	al Explain the stress factors that cause infection in fish, understanding of different symptoms of fish and learn about fish diseases diagnosis and how to treat it.		
proced disease animal	bes the foundations and ural steps for treating all es that affect different s, highlighting the medical ons that need surgical ntions.	a2 Discusses the principles and systems of fish culture and fish the care of aquarium		
Teaching	And Assessment Meth	ods	For Achieving Le	arning Outcomes:
Alignmer	nt of Learning Outcomes of K		ledge and Understand ssment Methods:	ing to Teaching and
(CILOs	Course Intended Learning Outcomes (CILOs) in Knowledge and Understanding be used Teaching Methods of assessment be used			
	course, students will be able			Written exam

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a1-	Explain the stress factors that cause infection in fish, understanding of different symptoms of fish and learn about fish diseases diagnosis and how to treat it.		Lectures using board, data shows and multimedia aids	 Quizzes Practical exam Report Assignment
a2-		•	Dialogue Discussion Brainstorming	

(B)	Intellectual Skills:			
Alignr	ment of Course Intended Learning Outcomes (CILOs) to I	rogran	Intended Learning Outcomes	(PILOs) in: Intellectua
Pro	gram Intended Learning Outcomes (Sub-	C	Course Intended Learnin	
	PILOs) in Intellectual skills		Intellectu	ıal Skills
After	completing this program, students will be able to:	After	completing this course, stud	lents will be able to:
B1-	Competently practices analytical and critical thinking skills in studying and assessing health problems and reading the results of animal medical examinations that is related to sciences.	b1-	Competently practices similar diseases in fish.	analytical and con
B2-	Predicts an appropriate medical diagnosis for the most common disease states through analysis of clinical story data and the results of medical examinations of a sick animal.	b2- Predicts an appropriate medical diagnosis most common disease states through ana clinical story data and the results of examinations of a sick fish		
	Teaching And Assessment Meth	ods I	or Achieving Learn	ing Outcomes:
Align	ment of Learning Outcomes of Intellectual Ski	lls to T	Teaching Methods and As	ssessment Methods:
Cou	rse Intended Learning Outcomes (CILOs) in Intellectual Skills.	Teac	ching strategies/methods to be used	Methods of assess
After	completing this course, students will be able to:	• M	ultimedia aids	-Written exam
b1-	Competently practices analytical and compares similar diseases in fish.		osts olving problems	- Practical exam
b2-	Predicts an appropriate medical diagnosis for the most common disease states through analysis of clinical story data and the results of medical examinations of a sick fish	• C	linical and small group sessions grainstorm	-Oral exam- Quizzes- Report assignment- Performance evalual

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			-Discussion	
(C)	Professional and Practical Skills:	•	·	
Align	ment of Course Intended Learning Outcomes (CILOs) to Program I Practical SI		PILOs) in: Professional and	
	Program Intended Learning Outcomes (Sub- PILOs) in Professional and Practical Skills	Course Intended L (CILOs) in Profession	al and Practical Skills	
After	completing this program, students will be able to:	After completing this cour	se, students will be able to:	
C1-	Accurately records a comprehensive pathological story of a sick animal including information on healthy behavior and the necessary checks.	_	pathogens on fish and It ish samples from ponds	
C4-	Treat animal patients safely and effectively considering the evaluation of the results, the appropriate modification of the treatment plan and the accurate description of the appropriate medications.	Choose the right treatment type, and measures the quality of water for fis farming		
	Teaching And Assessment Methods	8	0	
Alig	nment of Learning Outcomes of Professional and Practical Ski Course Intended Learning Outcomes (CILOs) in Professional and Practical Skills	Ils to Teaching and Assessn Teaching strategies/methods to be used	Methods of assessment	
After	completing this course, students will be able to:	- Practical training	-Written exam	
c1- c2-	Determines the pathogens on fish and It collects infected fish samples from ponds Choose the right treatment type, and it measures the quality of water for fish farming	on examples Field visits - Projects, tasks and costs	- Practical exam- Oral exam- Quizzes- Report assignment- Performance evaluation	

(D) General / Transferable Skills:

Alignment of Course Intended Learning Outcomes (CILOs) to Program Intended Learning Outcomes (PILOs) in: Gener Transferable skills

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-Discussion









Program Intended Learning Outcomes (PILOs) in			Course Intended Learning Outcomes (C General / Transferable skills		
1.04	General / Transferable skills	A 64			
	completing this program, students will be able to:		r completing this course, stud		
D1-	Communicates effectively with Professional colleagues and animal owners and expresses his ideas clearly and objectively.	d1-	Communicates effective colleagues and animal ideas clearly and objective communicates.		
D2-	Develops his scientific, professional and research capabilities and follow what is emerging in his field of specialization and using computer applications and information and communication technology.	d2	Works in normal condi- alone and effectively wi	,	
	Teaching And Assessment Methodalignment of Learning Outcomes of General and Tra				
Co	ourse Intended Learning Outcomes (CILOs) in General and Transferable Skills		ching strategies/methods to be used	Methods of a	
After	completing this course, students will be able to:	-Self learning by preparing essay and presentations		- Achievemer -Evaluating s	
d1-	Communicates effectively with Professional colleagues and animal owners and expresses his		omputer and faculty rary)	presentation	
	ideas clearly and objectively.	-Sc	cientific visits iscussions	-Practical exa - Report assig	

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1 – Course Topics/Items:

a – Theoretical Aspect

Order	Topic List / Units	CILOs (symbols)	Sub-topic List	Numbe r of weeks	Contact hours
1	Introduction to diseases	a1,a2,b1,b2,c1,,c2	Definition of diseases and pathogens and definition of stress	1	2
2	Bacterial diseases	a1,a2,b1,b2,c1,,c2	Flexibacter columnaris,	1	2

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أ.د. القاسم محمد عباس

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			Pseudomonas fluorescens		
			,Pseudmonas spp		
3	Bacterial diseases	a1,a2,b1,b2,c1,,c2	Entrwarsiella trade ,Vibrio anguillarum ,Aeromonas hydrophila ,Aeromonas salmonicida	1	2
٤	Viral diseases	a1,a2,b1,b2,c1,,c2	Infecious Pancreatic Necrosis(IPN), Spring Viraemia of carp, Channel catfish virus diseases	1	2
5	Parasitic diseases	a1,a2,b1,b2,c1,,c2	Protozoan diseases, Fish warms, Crustacean parasites	1	2
6	Fungal diseases	a1,a2,b1,b2,c1,,c2	Piscine mycoses, Saprolegnia, Aspergillomycosis	1	2
7	Non- infectious diseases	a1,a2,b1,b2,c1,,c2	Definition non- infectious diseases	1	2
8	Nutrition diseases	a1,a2,b1,b2,c1,,c2	Protein deficiency, Amino acid deficiency, fat deficiency	1	2
9	Nutrition diseases	a1,a2,b1,b2,c1,,c2	Vitamins deficiencies	1	2
10	Environmental diseases	a1,a2,b1,b2,c1,,c2	Water quality, Dissolved oxygen ,Ammonia toxicity	1	2
11	Pollution Diseases	a1,a2,b1,b2,c1,,c2	Degrdable wastes, non-degrdable wastes, Recovery zone	1	2
12	Prophylaxis and Therapy	a1,a2,b1,b2,c1,,c2	Exclusion, principles of Prophylaxis	1	2

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13	System of Fish culture in Arab Countries	a1,a2,b1,b2,c1,,c2	Extensive fish culture, semi intensive fish culture, Intensive fish culture	1	2
14	Fish classification	a1,a2,b1,b2,c1,,c2	Types of fish culture in pond	1	2
Ni	Number of Weeks /and Units Per Semester			14	28

Orde r	Training Tasks	CILOs (symbols)	Number of weeks	Contact hours
1	Fish Anatomy	a1,a2,b1,b2,c1,,c2	1	2
2	Fish Classification	a1,a2,b1,b2,c1,,c2	2	4
3	Methods of taking and storing fish samples	a1,a2,b1,b2,c1,,c2	1	2
4	Apparent examination of fish	a1,a2,b1,b2,c1,,c2	1	2
5	Diagnosis of injuries to fish	a1,a2,b1,b2,c1,,c2	1	2
6	Medicines and common compounds for fish treatment and methods of use	a1,a2,b1,b2,c1,,c2	1	2
7	Fish culture	a1,a2,b1,b2,c1,,c2	2	4
8	Water analysis in fish ponds	a1,a2,b1,b2,c1,,c2	1	2
9	visit to a fish farm	a1,a2,b1,b2,c1,,c2	2	4
10	Visit to the fish port	a1,a2,b1,b2,c1,,c2	1	2
11	Aquariums ornamental fish	a1,a2,b1,b2,c1,,c2	1	2
	Number of Weeks /and Units I	Per Semester	14	28

Teaching strategies of the course:

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discussion

Brainstorming

Problem solving

Simulation Method Practical presentations&

(Lab works) Practical in computer Lab

projects

Self-learning

Cooperative Learning

Share experiences between colleagues

3-Assessment Methods:

Schedule of Assessment Tasks for Students During the VI. **Semester: Aligned Course** Proportion Week Learning **Assessment Method** Mark of Final No. Due **Outcomes (CILOs** Assessment symbols) Participation and quizzes 1-12 a1,a2,b1,b2,c1,,c2 10 10% **Assignments** 4-12 **10** a1,a2,b1,b2,c1,,c2 10% 3 Mid-semester exam 8 **20** 20% a1,a2,b1,b2,c1,,c2 a1,a2,b1,b2,c1,.c2 4 **Final Exam** 16 60 60% **Total** 100 100%

VII. Learning Resource (MLA style or APA style)S:				
Required Textbook(s) (maximum two)				
عبد الحميد محمد عبدالحميد (١٩٩٤) الاسس العلمية لانتاج الاسماك ورعايتها — • نشر للجامعات المصرية ـ مكتبة الوفاء ـ المنصورة ـ مصر				

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Stephen.A.Smith (2019) Fish Diseases and Medicine . CRC Press
Recommended Readings and Reference Materials
ل الاستزراع المائي ٢٠٠٤ تاليف د.جيمس دايليو افولت ترجمة د. فيصل بخاري طبع في امريكا شركة
ايه في ايه للطباعة والنشر
Essential References
Electronic Materials and Web Sites etc.
Other Learning Material:
-

7	K. Course Policies:
1	Class Attendance:
	MANDATORY TO ATTEND ALL COURSE LECTURES
2	Tardy:
	Not allowed at all. Students must be in class 10 minutes prior to the
	beginning of lectures.
3	Exam Attendance/Punctuality:
	Attendance is mandatory; absence is accepted with valid excuse.
4	Assignments & Projects:
	All assignments and projects are to be submitted on their due date. Any
	assignment turned in after the due date will not be accepted without valid and
	reasonable excuse.
5	Cheating:
	Not tolerated and may lead to EXPELLING the student from the program
6	Plagiarism:
	Not tolerated AT ALL and may lead to EXPELLING the student from the
	program
7	Other policies:
	1.All devices must be on silent or at least on vibration during
	lectures/labs.

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- 2.Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room.
- 3. Any of type/ form of cheating is not allowed no matter what.
- 4. Maintain silence during lectures and disturbance is not allowed.

Course Plan of Fish Breading and Diseases.

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د. عبدالرقيب الشامي









X Information about Faculty Member Responsible for the Course:							
Name of Faculty Member	Fawzi Hamood Mohammed Elsagheer	Office Hours					
Location & Telephone No.	Sanaa, 00967770665323	SAT	SUN	MON	TUE	WED	THU
E-mail	Fawzielsagheer@gmail.com			10- 11			

KI.	(I. Course Identification and General Information:						
	1	Course Title:	Fish Breading and Diseases			ases	
	2	Course Number & Code:		P	A575		
				C.H			
	3	Credit hours:	Th.	Seminar	Pr.	F. Tr.	Total
			2	-	-	1	3
	4	Study level/year at which this course is offered:	Level 5 / first semester		r		
	5	Pre -requisite (if any):	MI	351, MI35	53, MI	355, M	II357
	6	Co –requisite (if any):			Non		
	7	Program (s) in which the course is offered	Veterinary medicine		;		
	8	Language of teaching the course:	English / Arabic				
	9	System of Study:		Two semesters / Year			•
	10	Mode of delivery:	Prof	essor. Pha	l. Faw	zi Elsa	igheer
	11	Location of teaching the course:					

П.	Course Description:	

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د. عبدالرقيب الشامي









This course aims to provide the student with basic knowledge, concepts and information about infectious and non-infectious diseases in fish and the different and modern methods and their diagnosis, as well as identifying the natural composition of the fish body and the external characteristics and internal anatomy of fish species and identifying ways to care for fish in fish farming systems in ponds as well as the development and care of fish Decorations

II. Intended learning outcomes (ILOs) of the course:

After completing this course, students will be able to:

- a1- Explain the stress factors that cause infection in fish, understanding of different symptoms of fish and learn about fish diseases diagnosis and how to treat it
- a2- Discusses the principles and systems of fish culture and fish the care of aquarium
- b1- Competently practices analytical and compares similar diseases in fish.
- b2- Predicts an appropriate medical diagnosis for the most common disease states through analysis of clinical story data and the results of medical examinations of a sick fish
- c1- Determines the pathogens on fish and It collects infected fish samples from ponds
- c2- Choose the right treatment type, and it measures the quality of water for fish farming
- d1- Communicates effectively with Professional colleagues and animal owners and expresses his ideas clearly and objectively.
- d2- Works in normal conditions, crises and epidemics, alone and effectively within a medical team

v. Co	urse Content:		
A – Th	eoretical Aspect:		
Order	Topics List	Week Due	Contact Hours
1	Introduction to diseases	1	2

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2	Bacterial diseases	2	2
3	Bacterial diseases	3	2
4	Viral diseases	4	2
5	Parasitic diseases	5	2
6	Fungal diseses	6	2
7	Non- infectious diseases	7	2
8	Mid-term exam	8	2
9	Nutrition diseases	9	2
10	Nutrition diseases	10	2
11	Environmental diseases	11	2
12	Pollution Diseases	12	2
13	Prophylaxis and Therapy	13	2
14	System of Fish culture in Arab Countries	14	2
15	Fish classification	15	2
16	Final exam	16	2
Num	ber of Weeks /and Units Per Semester	16	32

	b- Training Aspect:		
Order	Training Tasks	Week Due	Contact hours
1	Fish Anatomy	1	2
2	Fish Classification	2,3	4
3	Methods of taking and storing fish samples	4	2
4	Apparent examination of fish	5	2
5	Diagnosis of injuries to fish	6	2
6	Medicines and common compounds for fish treatment and methods of use	7	2
7	Mid-Term Exam	8	2

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8	Fish culture	9,10	2
9	Water analysis in fish ponds	11	2
10	visit to a fish farm	12,13	2
11	Visit to the fish port	14	2
12	Aquariums ornamental fish	15	2
13	Final Exam	16	2
	Number of Weeks /and Units Per Semester	16	32

V. Teaching strategies of the course:

Lectures

discussion

Brainstorming

Problem solving

Simulation Method Practical presentations&

(Lab works) Practical in computer Lab

projects

Self-learning

Cooperative Learning

Share experiences between colleagues

/I. Assessment Methods:

No.	Type of Assessment Tasks	Week Due	Mark	Proportion of Final Assessment
1	Present/Absent	All	10	10%
2	Class activities	All	10	10%
3	Midterm written Exam	7 th	20	20%

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أ.د. هدى العماد









5	(theoretical) Total	10	100	100%
4	Final Exam	16 th	60	60%

I. Course Policies:	
1	Class Attendance:
	MANDATORY TO ATTEND ALL COURSE LECTURES
2	Tardy:
	Not allowed at all. Students must be in class 10 minutes prior to the
	beginning of lectures.
3	Exam Attendance/Punctuality:
	Attendance is mandatory; absence is accepted with valid excuse.
4	Assignments & Projects:
	All assignments and projects are to be submitted on their due date. Any
	assignment turned in after the due date will not be accepted without valid and
	reasonable excuse.
5	Cheating:
	Not tolerated and may lead to EXPELLING the student from the program
6	Plagiarism:

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Not tolerated AT ALL and may lead to EXPELLING the student from the program

7 Other policies:

- 1.All devices must be on silent or at least on vibration during lectures/labs.
- 2.Before any exam (written, practical, oral) student's identity will be checked (student's card, ID, passport). Without any of these documents, the student will not be allowed in the exam room.
- 3. Any of type/ form of cheating is not allowed no matter what.
- 4. Maintain silence during lectures and disturbance is not allowed.

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د. عبدالرؤف الشوكاني

د. عبدالرقيب الشامي