Course Description of Fish Breeding and Production

1. Course Name

Fish Breeding and Production

2. Course Code

FIBP226

3. Term/Year

Second semester 2023-2024

4. Description Preparation Date:

1-2-2024

5. A. Available Attendance Forms

In-Person

6. Number of Credit Hours (Total of Units)

2 theoretical + 3 practical / 3.5 units

7. Course administrator's name (mention all, if more than one name)

Dr. Khalid Hadi Mustafa Email : <u>khmm9191@uomosul.edu.iq</u>

Hani Hashem Muhammad .

8. Course Objectives

theoretical

- 1- Providing students with the knowledge and skills necessary to understand and apply the basics of education and fish production.
- 2- For the student to become familiar with the most important administrative and environmental factors for fish production.
- 3- Teaching the student the correct scientific foundations establishing fish farming ponds.
- 4- Enabling the student to know how to make the most of fish production.

practical

1- Enabling the student to identify environmental factors

Which affects the production and breeding of fish

- 2- Teaching the student the different methods of raising and producing fish.
- 3- Identifying the ponds' productivity of natural food and fertilizing the ponds correctly.
- 4- Identify the types of diseases that affect fish and ways to prevent them.

9. TEACHING AND LEARNING STRATEGIES

theoretical

- 1- Interactive lecture.
- 2-Explanation and clarification.
- 3. Brainstorm:

Brainstorming Debating and discussing

practical

- 1- Practical applications in poultry fields.
- 2- Scientific visits to feed factories.
- 3-Explanation and clarification.

Brainstorming Debating and discussing Reporting.

10. Course Structure

Week	Hours	Required Learning	Unit or subject	Learning	Evaluation
		Outcomes	Name	method	Method
First	2 Theoretical	theoretical	theoretical	Theoretical:	- Tests.
		a1: The student learns about	introduction to fish	Visual and	Assignment
		an introduction to fish farming	farming and	auditory	Discussions
		and production - a historical	production - a	methods	
		overview of fish farming - the	historical overview	Explanation	
		importance and advantages of	of fish farming - the	and dialogue	
	3Practical	fish - the food crisis and	importance and	style	
		global production	advantages of fish -		
			the food crisis and	Practical:	

			global production	Assignment	
		Practical:	groom production	and report	
		b6: The student is familiar	Practical:		
		with fish farming	fish farming		
Second	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
		a2: The student learns about	systems used in	Visual and	Assignment
		the systems used in raising and	raising and	auditory	Discussions
		producing fish - raising one	producing fish -	methods	
	3Practical	type of fish in an aquarium -	raising one type of	Explanation	
		raising several types of fish in	fish in an aquarium -	and dialogue	
		a tank - mixed farming - the	raising several types	style	
		level of intensification	of fish in a tank -		
			mixed farming - the		
		Practical:	level of		
		b7: The student is familiar	intensification		
		with some of the economic			
		fish farmed in Iraq and the	Practical:	Practical:	
		world	economic fish	Assignment	
			farmed in Iraq and	and report	
- TOI : 1	0.551	TO A STATE OF THE	the world		
Third	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
		a3: The student understands the nature of enclosures -	nature of enclosures	Visual and auditory	Assignment Discussions
	3Practical		- rearing in ponds, in	methods	Discussions
	SPractical	rearing in ponds, in cages, in canals, in enclosures, and in	cages, in canals, in enclosures, and in	Explanation	
		sea terrariums	sea terrariums	and dialogue	
		sea terrarrums	sca terrariums	style	
				Style	
		Practical:	Practical:	Practical:	
		b8: The student is familiar	basic components of	Assignment	
		with the basic components of	fish farming	and report	
		fish farming		1	
Fourth	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
		a4: The student learns about	fish farming in	Visual and	Assignment
		fish farming in closed rotary	closed rotary	auditory	Discussions
	3Practical	systems.	systems.	methods	
				Explanation	
		-	Practical:	and dialogue	
		Practical:	scientific and	style	
		b9: The student is familiar	practical	Donathal.	
		with the scientific and	foundations for	Practical:	
		practical foundations for establishing breeding ponds	establishing breeding ponds	Assignment and report	
Fifth	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
1 11111	2 Theoretical	b1: The student is familiar	fish rearing ponds -	Visual and	Assignment
		with fish rearing ponds -	choosing a site -	auditory	Discussions
	3Practical	choosing a site - methods for	methods for treating	methods	210000010110
		treating permeability in	permeability in	Explanation	
		earthen ponds - sizes and	earthen ponds - sizes	and dialogue	
		shapes of ponds - types of	and shapes of ponds	style	
		ponds according to the	- types of ponds		
		purpose of culture	according to the		
			purpose of culture		
		Practical:	D (1.1	D	
		b10: The student explains the	Practical:	Practical:	
		water environment	water environment	Assignment	
Sixth	2 Theoretical	Theoretical:	Theoretical:	and report Theoretical:	- Tests.
SIAUI	2 Theoretical	a5: The student understands	the design of	Visual and	Assignment
		the design of parallel and	parallel and	auditory	Discussions
		area gar or paramer and	T		_ 100 40010110

	2D : 1	consecutive ponds -	consecutive ponds -	methods	
	3Practical	construction of seals for	construction of seals	Explanation	
		earthen ponds - bottom of the	for earthen ponds - bottom of the pond -	and dialogue	
		pond - water drainage lines - water processing lines	water drainage lines	style	
		water processing lines	- water processing		
			lines		
		Practical:	inics		
		b11: The student shows the	Practical:	Practical:	
		productivity of fish and the	productivity of fish	Assignment	
		density of culture	and the density of	and report	
		density of culture	culture	una report	
Seventh	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
		b2: The student is familiar	water sources - the	Visual and	Assignment
		with water sources - the	quality of surface	auditory	Discussions
		quality of surface water and	water and ground	methods	
		ground water and the physical	water and the	Explanation	
	3Practical	characteristics of pond water -	physical	and dialogue	
		field project	characteristics of	style	
			pond water - field		
			project		
		_			
		Practical:	Practical:	Practical:	
		b12: The student is familiar	steps for setting up	Assignment	
		with the steps for setting up	and preparing a fish	and report	
		and preparing a fish farming	farming tank - field		
Eighth	2 Theoretical	tank - field project Theoretical:	project Theoretical:	Theoretical:	- Tests.
Eignin	2 Theoretical	a6: The student learns about	chemical	Visual and	Assignment
		the chemical characteristics of	characteristics of	auditory	Discussions
		water in culture ponds - its life	water in culture	methods	Discussions
	3Practical	characteristics	ponds - its life	Explanation	
	Ji iacticai	Characteristics	characteristics	and dialogue	
			Characteristics	style	
		Practical:		53,12	
		c1: The student identifies	Practical:	Practical:	
		fertilizing ponds	fertilizing ponds	Assignment	
				and report	
Ninth	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
		b3: The student is familiar	aquatic plants and	Visual and	Assignment
		with aquatic plants and their	their control in	auditory	Discussions
		control in ponds - types of	ponds - types of	methods	
	3Practical	aquatic plants - methods of	aquatic plants -	Explanation	
		controlling aquatic plants.	methods of	and dialogue	
			controlling aquatic	style	
		Practical:	plants.	Practical:	
		c2: The student explains the	Practical:		
		natural food cycle in water	natural food cycle in	Assignment and report	
		natural 100d cycle iii water	water	and report	
Tenth	2 Theoretical	Theoretical:	Theoretical:	Theoretical:	- Tests.
2 3.1011		b4: The student is familiar	fertilizing ponds -	Visual and	Assignment
		with fertilizing ponds - types	types of fertilizers -	auditory	Discussions
	3Practical	of fertilizers - inorganic	inorganic fertilizers	methods	
		fertilizers - organic fertilizers -	- organic fertilizers -	Explanation	
		the decision to fertilize ponds	the decision to	and dialogue	
		or not	fertilize ponds or not	style	
		or not			
		or not			
			•		

		Practical:	Practical:	Practical:	
		c3: Explains fish diseases to students	fish diseases	Assignment and report	
Eleventh	2 Theoretical 3Practical	Theoretical: a7: The student remembers the feed and nutrition of fish - natural feed - phytoplankton, zooplankton and benthic organisms - additional feeds - chemical composition of feed materials. Practical:	Theoretical: feed and nutrition of fish - natural feed - phytoplankton, zooplankton and benthic organisms - additional feeds - chemical composition of feed materials.	Theoretical: Visual and auditory methods Explanation and dialogue style	- Tests. Assignment Discussions
		c4: The student distinguishes the transport of live fish	Practical: transport of live fish	Practical: Assignment and report	
Twelfth	2 Theoretical 3Practical	Theoretical: b5: The student explores the distribution of additional foods during the growing season - feeding methods - prepared foods and their types - a field project	Theoretical: distribution of additional foods during the growing season - feeding methods - prepared foods and their types - a field project	Theoretical: Visual and auditory methods Explanation and dialogue style	- Tests. Assignment Discussions
		Practical: b13: The student is familiar with administrative work in fish farms - a field project	Practical: administrative work in fish farms - a field project	Practical: Assignment and report	
Thirteen	2 Theoretical 3Practical	Theoretical: a8: The student learns about the needs of fish for the main nutrients, physical and chemical properties of food feeding plan and schedules	Theoretical: needs of fish for the main nutrients, physical and chemical properties of food - feeding plan and schedules	Theoretical: Visual and auditory methods Explanation and dialogue style	- Tests. Assignment Discussions
		Practical: b14: The student is familiar with harvesting and marketing	Practical: harvesting and marketing	Practical: Assignment and report	
fourteenth	2 Theoretical 3Practical	Theoretical: a9: The student learns about fish reproduction - natural reproduction - methods of partially controlled natural reproduction - the advantages of artificial propagation - artificial propagation	Theoretical: fish reproduction - natural reproduction - methods of partially controlled natural reproduction - the advantages of artificial propagation - artificial propagation	Theoretical: Visual and auditory methods Explanation and dialogue style	- Tests. Assignment Discussions
		Practical: b15: The student is familiar with fish nutrition	Practical: fish nutrition	Practical: Assignment and report	
Fifteenth	2 Theoretical	Theoretical: a10: The student learns about health care - the most important diseases that affect fish	Theoretical: health care - the most important diseases that affect fish	Theoretical: Visual and auditory methods Explanation	- Tests. Assignment Discussions

3Practical	Practical: b16: The student is familiar with fish farming in rice field	Practical: fish farming in ri fields	and dialogue style ce Practical: Assignment and report			
11. Course Evaluation						
This service allows customers to issue a permit	Evaluation Methods	Calendar Appointment (Week)	Degree	Relative Weight%		
1	Theoretical Final Report + Practical Experience Reports	Theoretical Week 15 Practical Week 1-15	7Theoretical +6Practical	13%		
2	Quiz (1)	Week (3)	4Theoretical +2Practical	6%		
3	Midterm test (theoretical and practical)	Week (9)	10Theoretical +5Practical	15%		
4	Quiz (1)	Week (12)	4Theoretical +2Practical	6%		
5	Final Practical Test	Practical Exam Week	20	20%		
6	Final theoretical test	Theoretical Exam Week	40	40%		
	Total		100	100%		
12. Learning and Teaching Resources						
Required textbooks (methodology if any)		book on the basics of fish				
		breeding and production				
Key References (Sources)						
Recommended supporting (scientific journals, reports						
E-References, Websites						

Theoretical subject teacher Dr, Dr. Aysar mohammed salim saeed

practical subject teacher, M.M. Zuhoor Fouad Al-Obaidi

Chair of scientific committee

Prf. Dr. Muthanna Ahmed Muhammad Tayyib

Head of the Animal Production Department

Prf. Dr. Omar Diaa Muhammad

