



Course specification

1-Basic information

Course Code:	FDM:4256
Course title :	Fish Diseases and Management (part II)
Academic year:	4 th year
Program title:	Bachelor of veterinary medical science
Contact hours/ week	4hrs/week (Lecture: 2hrs/week - practical:2hrs/week)
Approval Date	

2-Professional information

Overall aims of course:

The main purpose of this course is introducing the academic background and practical experience about keeping fish in a state of good health.

3- Intended learning outcomes of course (ILOs)

a- Knowledge and understanding:

By the end of this course the student should be able to:

- a.1. Recall the relationship between fish health and aquatic environment.
- a.2. Describe causes, epizootiology, pathogenesis, diagnosis, prevention and control of fish diseases.

b-Intellectual skills

By the end of this course the student should be able to:

- b.1. Interpret water quality in fish pond and how to maintain and improve it.
- b.2. Organize fish health.
- b.3. Discriminate fish farming, fish diseases and suitable prevention & control measures.

c-Professional and practical skills

By the end of this course the student should be able to:

- c.1. Collect & preserve of diagnostic specimens.
- c.2. Perform clinical, post-mortem, parasitological, bacteriological, mycological & virological examinations of fish.
- c.3. Apply fish diseases treatment, hygienic disposal of diseased fish & disinfection of fish culture facilities.

D-General and transferable skills

The student should be able to

- d.1. Use information technology & information resources.
- d.2. Practice continuous self learning & self evaluation.



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- d.3. Work in group.
- d.4. Communicate with fish specialists.
- d.5. Participate in private business.

4-Topics and contents

Course	Topic	week	No. of hours	Lectures	Practical
	-Introduction, stress & its relation to diseases in fish	1 st	2	2	–
4th year- Second term. Fish diseases & management. (Lec. 2 h./week, Pract. 2h./week)	-Parasitic diseases of fish	2 nd -3 rd 4 th -5 th 6 th -7 th	12	12	–
	-Bacterial diseases of fish	8 th -9 th - 10 th - 11 th	8	8	–
	-Mycotic diseases of fish	12 th	2	2	–
	-Viral diseases of fish	13 th	1	1	–
	- Non-infectious fish diseases	13 th	1	1	
	-Clinical diagnosis of parasitic fish diseases	1 st – 2 nd	4	–	4
	-Clinical diagnosis of bacterial fish diseases	3 rd - 4 th	3	–	3
	-Clinical diagnosis of mycotic fish diseases	4 th -5 th	2	–	2
	- Clinical diagnosis of non-infectious fish diseases	5 th	1	-	1
	-Laboratory diagnosis of parasitic fish diseases	6 th -7 th	4	–	4
	Laboratory diagnosis of bacterial fish diseases	8 th -9 th	3	-	3
	Laboratory diagnosis of mycotic fish diseases	9 th – 10 th	2	-	2
	- Laboratory diagnosis of non-infectious fish diseases	10 th	1	-	1
	-Prevention & control of parasitic fish diseases	11 th	2	–	2
	-Prevention & control of bacterial fish diseases	12 th	2	-	2
	-Prevention & control of mycotic fish diseases	13 th	1	-	1



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	- Prevention & control of non-infectious fish diseases	13 th	1	-	1
	Students activities -Computer search& class presentations.		-	-	-
	- Field visits.				
	Total.		52	26	26

5-Teaching and learning methods

- 5.1- Lectures (brain storming, discussion) using board and data shows.
- 5.2- Construct models concerning fish diseases.
- 5.3- Practical
- 5.3.3- Collection of blood samples.
- 5.3.4- Field and laboratory activity.

6-Teaching and learning methods for the students with disabilities

More explanation for difficult topics in office- hours

7-Student assessment

7.1. Assessments methods:

Method	Matrix alignment of the measured ILOs/ Assessments methods			
	K&U	I.S	P&P.S	G.S
Written Exam	a.1,a.2	b.3	c.3	d.4
Practical exam. & Student activities		b.1,b.2,b.3	c.1,c.2,c.3	d.1,d.2,d.3,d.4, d.5
Oral Exam	a.1, a.2	b.1,b.2,b.3		d.1, d.4.

7.2. Assessment schedules/semester:

Method	Week(s)
Practical exams	Week 14 th
Written exams	Managed by the administration (within 15-16-17 weeks)
Oral Exam	Managed by the department

7.3. Weight of assessments:

Assessment	Weight of assessment
Practical exams	20%



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Written exams	50%
Oral examination	20%
Student activities	10%
Total	100%

8- List of references

8.1. Notes and books

Departmental notes on:

None

-Handout

8.2. Essential books:

- **Fish diseases & disorders, 1st Edition ,(Edited by P.T.K woo)
published by CAB international 1999, ISBN 0851991947**
- **Bacterial fish pathogens, 4th edition, 2007 (B. Austin.& D.A.Austin)**

*These books are found in the library of faculty of veterinary medicine , Beni-suef university.

8.3. Recommended books:

- **Fish medicine, 1st Edition, (Michael K.Stoskopf,D.v.m.)
Published by W.B. Saunders Company 1996,ISBN 0-7216-2629-7**
- **Fish diseases diagnosis and treatment ,1st Edition, (Edward j.noga)
Published by Mosby. Year Book1996, Editor: Lindal.Duncan,
ISBN 1-55664-374-8**

*These books are found in the library of faculty of veterinary medicine, Beni-suef university.

8.4. Journals, Websitesetc

Journals:

- **Journal of fish diseases**
- **Aquaculture**
- **Aquatic research**
- **Aquatic science**
- **Aquatic fish organism**
- **Journal of fish biology**
- **Fish & shellfish immunology**



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- **Journal of fish pathology**
- **Canadian Journal of fisheries & aquatic sciences**

Websites:

- **WWW.fishyfarmacy.com/Symptom**
- **WWW.Aqualink.com/disease/s-**
- **WWW.aquatec-solutions.com**
- **WWW.aquatececo.com**
- **WWW.fishdisease.net**
- **WWW.nationalfishpharm.com**
- **WWW.kiovet.com**
- **WWW.nosickfish.com**
- **WWW.aquariumfish.com**
- **WWW.candyfish.net**
- **WWW.fishreports.net**
- **WWW.fishthe.net**
- **WWW.fishnetdialynews.com**
- **WWW.fishseo.com**
- **WWW.ficklefish.net**
- **WWW.coloradofishing.net**
- **WWW.netmorefish.co.uk**
- **WWW.5fish.net**
- **WWW.saltwetfish.net**

Course Coordinator

Head of Department

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Topic	week	Intended learning outcomes of course (ILOs)			
		K&U (a)	I.S (b)	P.P.S (c)	G.T.S (d)
-Introduction, stress & its relation to diseases in fish	1 st	a.1	–	–	–
-Parasitic diseases of fish	2 nd -3 rd -4 th -5 th -6 th -7 th	a.2	–	–	–
-Bacterial diseases of fish	8 th -9 th - 10 th - 11 th	a.2	–	–	–
-Mycotic diseases of fish	12 th	a.2	–	–	–
-Viral diseases of fish	13 th	a.2	–	–	–
- Non-infectious fish diseases	13 th	a.2			
-Clinical diagnosis of parasitic fish diseases	1 st – 2 nd	a.2	b.3	c.2	
-Clinical diagnosis of bacterial fish diseases	3 rd - 4 th	a.2	b.3	c.2	
-Clinical diagnosis of mycotic fish diseases	4 th -5 th	a.2and3	b.3	c.2	
- Clinical diagnosis of non-infectious fish diseases	5 th	a.2 and 3	b.3	c.2	
-Laboratory diagnosis of parasitic fish diseases	6 th -7 th	a.2	b.3	c.2 c.2	–
Laboratory diagnosis of bacterial fish diseases	8 th -9 th	a.2	b.3	c.1 c.2	–
Laboratory diagnosis of mycotic fish diseases	9 th – 10 th	a.2	b.3	c.1 c.2	–
- Laboratory diagnosis of non-infectious fish diseases	10 th	a.2	b.3	c.1 c.2	–
-Prevention & control of parasitic fish diseases	11 th	a.2	b.3	c.3	–
-Prevention & control of bacterial fish diseases	12 th	a.2and3	b.3	c.3	–



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-Prevention & control of mycotic fish diseases	13 th	a.2	b.3	c.3	–
- Prevention & control of non-infectious fish diseases	13 th	a.2	b.3	c.3	–
Students activities -Computer search& class presentations.					d.1, d.2, d.3, d.4
-Field visits					d.5

Topic	Week
-Introduction, stress & its relation to diseases in fish	1 st
-Parasitic diseases of fish	2 nd -3 rd -4 th -5 th -6 th -7 th
-Bacterial diseases of fish	8 th -9 th - 10 th -11 th
-Mycotic diseases of fish	12 th
-Viral diseases of fish	13 th
- Non-infectious fish diseases	13 th
-Clinical diagnosis of parasitic fish diseases	1 st – 2 nd
-Clinical diagnosis of bacterial fish diseases	3 rd - 4 th
-Clinical diagnosis of mycotic fish diseases	4 th -5 th
- Clinical diagnosis of non-infectious fish diseases	5 th
-Laboratory diagnosis of parasitic fish diseases	6 th -7 th
Laboratory diagnosis of bacterial fish diseases	8 th -9 th
Laboratory diagnosis of mycotic fish diseases	9 th – 10 th
- Laboratory diagnosis of non-infectious fish diseases	10 th
-Prevention &control of parasitic fish diseases	11 th
-Prevention &control of bacterial fish diseases	12 th
-Prevention &control of mycotic fish diseases	13 th
- Prevention & control of non-infectious fish diseases	13 th