

COURSE OUTLINE DETAILS

1. Course: English for Aquaculture (Anh văn chuyên ngành thủy sản I)

- **Code number:** AQ101

- **Credits:** 2

- **Hours:** 30 theory hours, 60 self-study hours

2. Management Unit:

- **Department:** Freshwater Aquaculture, and Aquatic Pathology

- **Faculty:** College of Aquaculture and Fisheries

3. Requisites:

- **Prerequisites:** English bridging program (FL001-FL009)

- **Corequisites:** No

4. Course objectives:

Objectives	Descriptions	Program Outcomes
4.1	Provide basic concepts/terms and knowledge on biological fields (Fish morphology, water quality, fish genetics, nutrition requirements, fish pathology and fish health management) in aquaculture.	2.1.1
4.2	Train students' methods of learning new aquaculture courses in English	2.2.2
4.3	Train students' rational thinking, activeness, confidence and creativity and team working skills	2.2.2
4.4	Strengthen habits of self-study long-life learning	2.3

5. Course learning outcomes:

COs	Descriptions	Objectives	POs
	Knowledge		
CO1	Memorize basic vocabulary and scientific terms in biological fields of aquaculture	4.1	2.1.1
CO2	Explain basic concepts of aquaculture and related fields	4.1	2.1.1
	Skills		
CO3	Identify the meaning and appropriate use of new vocabulary and scientific terms in aquaculture and related fields	4.2	2.2.2
CO4	Apply English communication skills to learning aquaculture	4.2	2.2.2
CO5	Develop rational thinking, activeness, confidence and creativity and team working skills	4.3	2.2.2
	Attitudes/Autonomy/Responsibilities		

COs	Descriptions	Objectives	POs
CO6	Build up learning English enthusiasm and develop long-life learning	4.4	2.3

6. Brief description of subject content:

The course covers basic English terms and knowledge in biological fields of aquaculture including aquatic animal morphology, species taxonomy, water quality, nutrition and feeding, fish genetics and selective breeding, fish/shrimp diseases-classification/aetiological agent/transmission pathways/diagnostics/treatments.

7. Course structure:

7.1. Theory:

	Content	Hours	COs
Chapter 1.	Aquatic animal morphology and species taxonomy	2	CO1-CO6
1.1.	Introduction to the course		
1.2.	Introduction to websites/journals/e-books related to aquaculture and fisheries		
1.3.	Fish morphology		
1.4.	Shrimp morphology		
1.5.	Common species		
Chapter 2.	Aquatic animal nutrition and feeding	4	CO1-CO6
2.1.	Nutrition requirements of fish		
2.2.	Nutrition requirements of crustacean		
2.3.	Feed ingredients		
2.4.	Feed formulation		
2.5.	Feeding management		
Chapter 3.	Water quality in aquaculture ponds	4	CO1-CO6
3.1.	Physical factors		
3.2.	Chemical factors		
3.3.	Biological factors and food chain		
3.4.	Relationships among these factors		
Chapter 4.	Introduction to fish genetics	2	CO1-CO6
4.1.	Basic genetic concepts		
4.2.	Quantitative and qualitative genetics		
Chapter 5.	Fish genetic improvement approaches	3	CO1-CO6
5.1.	Selection		
5.2.	Hybridization		
5.3.	Chromosome manipulation		
Chapter 6.	Introduction to aquatic animal diseases	3	CO1-CO6
6.1.	Health management in aquatic animals		
6.2.	Classification of aquatic animal diseases		
6.3.	Diagnostics and therapeutics for Aquatic animal health		
Chapter 7	Introduction to fish diseases	6	CO1-CO6
7.1.	Hemorrhagic disease		
7.2.	Streptococcosis		
7.3.	Spring Viraemia of Carp (SVC)		

Chapter 8 Introduction to shrimp diseases

6 CO1-CO6

- 8.1 Luminous disease
- 8.2 White Spot Disease
- 8.3 Yellowhead Disease

8. Teaching method:

Teaching methods include:

- Traditional classroom teaching combined with online learning and independent study
- Group and individual homework and presentation

9. Duties of student:

Students have to do the following duties:

- attending classes and participating in class activities.
- preparing before classes all required reading and homework

10. Assessment of student learning outcomes:

10.1. Assessment

No.	Point components	Rules and Requirement	Weights	COS
1	Mini-tests and exercises	Multiple choice and/or short-answer questions	40%	CO1, CO2
2	Final exam	Multiple choice and short-answer questions, filling blanks, matching, writing	55%	CO1, CO2, CO3, CO4, CO5
4	Participation	Attending 90% class hours Contributing to class discussion	5%	CO6

10.2. Grading

- Grading components and final test scores will be marked on a scale of 10 (0 to 10), rounded to one decimal place.
- Subject score is the sum of all the components of the evaluation multiplied by the corresponding weight. The subject score is marked on a scale of 10 and rounded to one decimal place, then is converted to A-B-C-D score and score on a scale of 4 under the academic provisions of the University.

11. Materials:

Materials information

Code number

[1] Teaching material/hand-out

[2] (other references)

2.1. English for aquaculture textbook

2.2. Elsevier's dictionary of aquaculture

2.3. Glossary of aquaculture _FAO 2008

2.4. Water quality in aquaculture ponds

2.5. A practical guide to nutrition, feed and feeding of catfish

2.6. Improving Penaeus monodon hatchery practices

2.7. Bondad-Reantaso, M.G., McGladdery, S.E., East, I., and Subasinghe, R.P. (eds.) (2001) Asia Diagnostic Guide to Aquatic Animal Diseases. 240 p.

2.8. Manual of Diagnostic Tests for Aquatic Animals 2018

CAF library

639.803M392/CAF

CAF library

www.pir.sa.gov.au/factsheets

www.extension.org

www.fao.org

www.fao.org

www.oie.int

12. Self-study Guide:

Week	Content	Theory (hours)	Students' duties
1	Chapter 1: Aquatic animal morphology and species taxonomy	2	<i>Before class:</i> + Read Lesson 7, reference 2.1 + Search any species from www.fishbase.org

			<i>Exercise:</i> search for other aquaculture species from different resources. Use references 2.2 and 2.3
2-3	Chapter 2: Aquatic animal nutrition and feeding	4	<i>Before class:</i> + Read reference 2.5 + Each student lists at least five new vocabulary and terms relating to nutrition <i>Exercise:</i> Search for feeding behavior of a fish/shrimp species.
4-5	Chapter 3: Water quality in aquaculture ponds	4	<i>Before class:</i> + Read Lesson 3, reference 2.1 + Read reference 2.4
6	Chapter 4: Introduction to fish genetics	2	<i>Before class:</i> + Read Lesson 20, reference 2.1 <i>Exercise:</i> search for an animation of mitosis and meiosis
7-8	Chapter 5: Fish genetic improvement approaches	3	<i>Before class:</i> + Read Lesson 21, reference 2.1 <i>Exercise:</i> search for figures describing chromosome manipulation. Use references 2.2 and 2.3
10	Chapter 6: Introduction to aquatic animal diseases	3	<i>Before class:</i> + Read Lesson 22, reference 2.1 + Read Section 1, section 2 (F1), reference 2.7
11-12	Chapter 7: Introduction to fish diseases	6	<i>Before class:</i> + Read Section 2, reference 2.7 + Use references 2.7 and 2.8 for new words
13-14	Chapter 8: Introduction to shrimp diseases	6	<i>Before class:</i> + Read Section 4, reference 2.7 + Read Section 2.2, reference 2.8 <i>Exercise:</i> Use references 2.7 and 2.8 for new words
15	Final exam		

ON BEHALF OF RECTOR
DEAN OF COLLEGE



Can Tho, 30.../...8.../2022
HEAD OF DEPARTMENT

A blue ink signature, likely belonging to Phạm Thanh Liêm, written over a horizontal line.

Phạm Thanh Liêm