

AQUATIC MICROBIOLOGY

CREDIT: 2 (1 THEORY CREDITS, 1 PRACTIC) **SEMESTER**: 3





EXPECTED LEARNING OUTCOMES (ELOs)

KNOWLEGES

- Apply mathematical, scientific, technical, social knowledge, and ELO 1 knowledge on contemporary issues in the field of Aquaculture
- Analyze data to conduct surveys and research in the field of Aquaculture
- Assess the quality of care, treatment, and health management of ELO 3 Aquaculture species
- Design the model of Aquaculture farming and seed production along the direction of clean production and ensuring safety food sources for human.

SOFT SKILLS

- Apply creative thinking, critical thinking, and problem solving skills in a ELO 5 variety of contexts.
- Work independently, lead the team, and manage the project towards its goals.
- Communicate effectively, understand cultural differences, read English **ELO 7** documents in the field of Aquaculture

ADVANCED SKILLS

- Provide technical advice and business solutions in the field of Aquaculture ELO 8 to benefit stakeholders (producers, traders, communities).
- Use information technology and modern equipment of the Aquaculture ELO 9 sector effectively.

ATTITUDES

Develop a professional work attitude, uphold professional ethics, **ELO 10** demonstrate an awareness of environmental and human protection, love and protect animals.

ELO 11 Demonstrate a spirit of entrepreneurship and life-long learning







LEARNING CONTENT

- Chapter 1: Microbiological overview
- Chapter 2: Growth and development of microbiology
- Chapter 3: The role of microbiology in water and in aquatic animals
- Chapter 4: Microbial pathogens





DUTIES OF STUDENTS

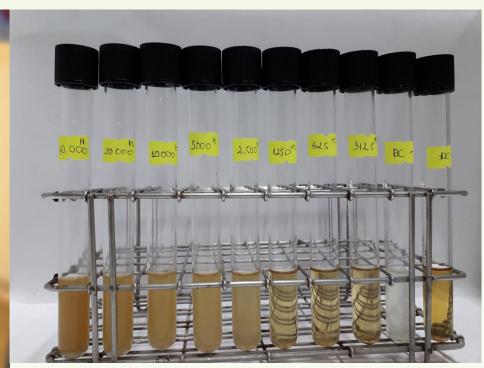
- Attendance: Students must attend at least 80% for the theory and 100% for the practical.
- Preparing for lectures: Students must read teaching materials, reference books and search for materials provided and introduced by lecturers.
- Attitude: actively participating in questioning, commenting, critical review, evaluation and marketing



COURSE EXPECTED LEARNING OUTCOMES (CELOs)

COUNCE EXT ESTED ELYTHING COTOSITES (CEECS)			
Sympol	Expected learning outcome of course (CELOS)	Expected learning outcome of progame (ELOs)	
KNOWL	EGES		
CELO1	Explain the structure, characteristics of growth and development of microbiology		ELO1
CELO2	Analyze the role of microbiology in water and in aquatic animals		ELO3
CELO3	Assess the influence of microbiology in the treatment and health management of aquatic animals		ELO3
SOFT SK	(ILLS		
CELO4	Communicate effectively, the presentation and writing the report		ELO5, ELO7
CELO5	Work independently, work the team		ELO5, ELO6, ELO7
ADVANC	ED SKILLS		
CELO6	Determine density microbiology in water		ELO5, ELO6, ELO9
ATTITUD	ES		
CELO7	Conscious of professional ethics		ELO10
CELO8	Aware about self-study and self-research		ELO11

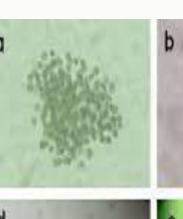




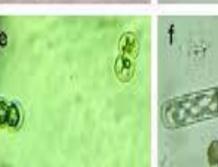
LEARNING METHODS

- Read independent material, ask related questions, listen, answer questions
- Join lectures, watch videos, discuss in groups
- Doing homework, specialized reports
- Practice: Sample analysis











RATING AND SCORING

Score scale: 10

 Process evaluation: 50% + Final exam: 50%



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