

Master of Science In Aquatic Animal Health and Ecosystem Management

DEPARTMENT OF AQUACULTURE AND FISHERIES SCIENCE

www.luanar.ac.mw/aquafish

PROGRAMME DESCRIPTION

The Master of Science in Aquatic Animal Health and Ecosystem Management program offers an interdisciplinary approach to studying the health and sustainability of aquatic ecosystems. Through a blend of theoretical coursework and practical training, students gain comprehensive knowledge in aquatic animal health, ecosystem dynamics, and management strategies. The curriculum covers topics such as aquatic pathology, disease prevention and control, ecosystem conservation, and sustainable aquaculture practices. Graduates are equipped with the skills to address challenges in aquatic health and ecosystem management, preparing them for careers in research, environmental consulting, government agencies, and aquaculture industries.

CAREER PROSPECTS:

Aquatic Veterinarian, Aquatic Disease Biologist, Aquatic Health Consultant, Aquatic Conservation Officer, Fisheries Health Inspector, Research Scientist, Environmental Policy Analyst, Aquatic Resource Manager, Aquatic Educator.

PROGRAMME STRUCTURE

The program consists of coursework and research. All students take all the core courses in Semester One and Semester Two (Year One). In addition, a student take two additional courses from electives upon approval by the major supervisor, depending on the research area of the students. The second year is used for research, data analysis, thesis writing, and final examinations.



PROGRAMME COURSES

Year 1 Courses

#	Course Code	Course Name Course	Type
	SEMESTER I COURSES		
1	AHE71101	Aquatic Animal Health and Ecosystem Management Seminar I	Core
2	AHE71102	Aquatic Animal Diseases, Diagnostics and Management	Core
3	AFS71102	Biostatistics and Research Methods	Core
4	AHE71103	Environmental Biology	Core
5	AHE71104	Aquatic Food Safety and Risk Assessment	Core
6	AHE71105	Applied Fish Anatomy and Physiology	Elective
7	AFS71105	Aquaculture Production Systems and Engineering	Elective
8	AHE71106	Aquatic Animal Health and Policy	Elective
9	AFS71103	Fish Nutrition and Feed Technology	Elective
10	AHE71107	Molecular Biology Application in Ecology and Bioengineering	Elective
	SEMESTER II COURSES		
CORE COURSES FOR THE AQUATIC ANIMAL HEALTH SPECIALIZATION			
2	AHE71201	Aquatic Animal Health and Ecosystem Management Seminar II	Core
3	AHE71202	Principles of Epidemiology for Control and Prevention of Aquatic Diseases	Core
4	AHE71203	Fish Immunology	Core
5	AHE71204	Aquatic Animal Pathology	Core
CORE COURSES FOR THE ECOSYSTEM MANAGEMENT SPECIALIZATION			
1	AHE71201	Aquatic Animal Health and Ecosystem Management Seminar II	Core
2	AHE71205	Aquatic Environmental Pollution	Core
3	AFS71212	Fisheries Ecology	Core
4	AHE71206	Ecotoxicology and Risk Management	Core
5	AHE71207	Environmental and Social Impact Assessment	Elective
6	AHE71208	Fish Pharmacology	Elective
7	AHE71209	Limnology and Water Quality Management	Elective
8	AHE71210	Principles of Economics and Entrepreneurship in Aquatic Resources	Elective

Year 2 Courses

#	Course Code	Course Name Course	Type
1	AHE72101	Research Progress	Core
2	AHE72201	Thesis Defense	Core

Fees Structure

MSc (International)

Category	Item	Year I ($)	Year 2 ($)	Total ($)
Administra-tive Fees	Application	20.00		20
	Registration	25.00	25.00	75
	Library	100.00	100.00	300
	Medical	245.00	245.00	735
	Examination	65.00	65.00	195
	Sub-Total	455.00	435.00	1325
Tuition fees	Tuition Fee (Average of Local and regional Universities)	2,619.00	2,619.00	5,238.00
	External and Internal examiner's fees and postage	250.00	250.00	500.00
	Supervisory Fees	250.00	250.00	500.00
	Sub-Total	**3,574.00**	**3724.00**	**7,088.00**
Research cost	Research	2,200.00	2,200.00	4,400.00
Student Welfare (7)	Settling-in allowance	95.00		95.00
	Setting-out allowance		95.00	95.00
	Holiday Allowance	60.00	60.00	120.00
	Personal Allowance	2,835.00	2,835.00	5,670.00
	Sub-Total	2,990.00	2,990.00	5,980.00
	GRAND TOTAL	**9,244.00**	**9,224.00**	**18,468.00**

MSc (Local)

Category	Item	Year I ($)	Year 2 ($)	Total ($)
Administrative Fees	Application	20		20
	Registration	25	25	50
	Library	100	100	200
	Medical	245	245	490
	Examination	65	65	130
	Sub-Total	455	435	890
	Tuition Fee (Average of Local and regional Universities)	1,545.00	1,565.00	3,110.00
	External and Internal examiners fees and postage	250	250	500.00
	Supervisory Fees	250	250	500.00
	Sub-Total	2,500.00	2,500.00	5,000.00
Research costs	Research	2,200.00	2,200.00	4,400.oo
Student Welfare	Settling-in allowance	95		95.00
	Settling-out allowance		95	95.00
	Holiday Allowance	60	60	120.00
	Personal Allowance	2,835.00	2,835.00	5,670.00
	Sub-Total	2,990.00	2,990.00	5,980.00

ENTRY REQUIREMENTS:

Candidates to be considered for recruitment into the MSc in Aquatic Animal Health and Ecosystem Management must have a minimum of a Bachelor of Science degree in Aquaculture, Fisheries Science, Animal/Veterinary Science, or other relevant Biological Sciences, with at least a credit pass. Those with a relevant Bachelor's degree with a mere pass but long working experience may also be considered.

CURRICULUM DELIVERY:

The curriculum will be implemented through blended learning, which combines face-to-face instruction with online teaching via the MOODLE platform and other platforms endorsed by the University.

LOCATION OF PROGRAM:

LUANAR Bunda College

TECHNIQUES OF DELIVERY:

A number of teaching methods will be employed lectures, demonstrations, research, seminars, field excursions, and any other as recommended by the university. Students will participate in practicals outlined in the syllabus of each course. The practicals will be conducted in the dry and wet laboratories on campus and facilities at the Fish Farm. Students will also participate in field practicals at farmers' fields as well as government/ private facilities



a University with endless possibilities

Africa Center of Excellence in Aquaculture and Fisheries Science – LUANAR

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