



**KENTUCKY STATE
UNIVERSITY**

AQUACULTURE (AQU)

AQU 507: Fish Genetics

An overview of fish genetics including basic principles and methods of selective breeding in aquaculture.

Prerequisite: Consent of instructor

Credit Hours: 3

Contact Hours: 3

AQU 510: Fish Diseases Laboratory

AQU 510 teaches students proper microscope use and an advanced approach to identifying various fish pathogens and plausible disease treatments. Writing will be emphasized by completing lab reports at an advanced scientific level.

Credit Hours: 1

Contact Hours: 1

AQU 511: Fish Diseases

An in-depth study of clinical diagnosis of fish diseases; necropsy of diseased fish; and formulation of corrective measures for disease control. (Three hours of lecture, two hours of laboratory per week)

Prerequisite: Consent of instructor

Credit Hours: 3

Contact Hours: 3

AQU 512: Fish Morphology/Physiology

An overview of fish morphology and physiology with emphasis on comparative and adaptive aspects among Osteichthyes (true bony fish). (Three hours of lecture, two hours of laboratory per week)

Prerequisite: Consent of instructor

Credit Hours: 4

Contact Hours: 3-4

AQU 521: Fish Nutrition

An overview of applied aspects of fish and shrimp nutrition including digestive physiology, nutrient requirements, nutrient chemistry, practical feedstuffs, feed formulation, and feed manufacture. (Three hours of lecture per week).

Prerequisite: CHE 200; MAT 115 or consent of instructor

Credit Hours: 3

Contact Hours: 3

AQU 522: Principles of Aquaculture

Introduction to principles underlying aquatic productivity and management with a survey of domestic and foreign cultures of fish and aquatic vertebrates.

Credit Hours: 3

Contact Hours: 3

AQU 527: Fish Reproduct/Spawning Tech

An overview of basic biology of fish reproduction and techniques of artificial spawning for common aquaculture species.

Credit Hours: 3

Contact Hours: 3

AQU 528: Fish Reproduction Labs

AQU 527 may be taken concurrently. This course will provide practical training and skills on investigation of reproductive system in fish and spawning techniques for several aquaculture species.

Credit Hours: 1

Contact Hours: 1

AQU 551: Survey of Production Methods

An overview of alternative production methods including ponds, cages, net/pens, raceways, and recirculating systems with application to suitable species.

Prerequisite: Consent of instructor

Credit Hours: 3

Contact Hours: 3

AQU 552: Aquaponics

An overview of the Aquaponic production systems including the aquaculture and hydroponic components, as well as their interactions and management.

Credit Hours: 3

Contact Hours: 3

AQU 560: Water Quality Management

A survey of theory and practice into the understanding and manipulation of the biological, chemical, and physical aspects of water quality in aquaculture production. (Three hours of lecture, two hours of laboratory per week)

Prerequisite: Consent of instructor

Credit Hours: 3

Contact Hours: 3

AQU 561: Water Quality Management Lab

AQU 561 teaches students advances water quality principles related to pond management. Laboratories include use of equipment, solving water quality problems and doing in-depth analysis of a specific body of water.

Credit Hours: 1

Contact Hours: 1

AQU 570: Recirculating Aquaculture

Credit Hours: 3

Contact Hours: 3

AQU 591: Internship: Aquaculture

Intensive experience involving practical on-site participation working at an aquaculture facility (University, state, or private) for graduate students. CREDIT: 1 TO 4 SEMESTER HOURS.

Prerequisite: Consent of instructor

Credit Hours: 1-4

Contact Hours: 1-4

AQU 600: Research Aquaculture

Laboratory or field research on approved thesis topic in aquaculture or related aquatic sciences

Credit Hours: 1-9

Contact Hours: 1-9

AQU 601: Thesis

Preparation of research based thesis on approved topic. CREDIT: 1 TO 3 SEMESTER HOURS.

Credit Hours: 1-3

Contact Hours: 1-3