THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Fishery and Aquaculture Technology

FAT 311 – Fish Physiology and Behaviour

COURSE PARTICULARS

Course Code: FAT 311
Course Title: Fish Physiology and Behaviour
No. of Units: 2
Course Duration: Two hours of theory per week for 15 weeks.
Status: Compulsory
Course Email Address: NIL
Course Webpage: NIL
Prerequisite: NIL

COURSE INSTRUCTORS

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COURSE DESCRIPTION

This course is a fisheries management course. However, it helps the students in understanding fish physiology and its behaviour. Fish growth and development, determination of fish growth. Reproduction and factors affecting both growth and reproduction in fish. Growth and reproduction in shell fish and its measurement. Different shapes and designs of fish in relation to aquatic environment. Structure of organs, tissues, cells and organelles in relation to their function.

COURSE OBJECTIVES

The objectives of this course are to:

- introduce students to the need of controlling fish population fisheries management; and
- educate the students on population dynamics, factors affecting fish population in water bodies and the means of control.

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:
(Knowledge based)

- explain the various fish parts used in age determination
- understand the importance and application of fish growth and knowledge to fisheries
- Describe the different types of fish shapes in relation to their environment
- Understand fish migration and factors affecting it
- Understand fish reproduction.

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance	10%
Assignments	10%
Test(s)	20%
Final Examination	60%
TOTAL	**100%**

GENERAL INSTRUCTIONS

Attendance: It is expected that every student will be in class for lectures . Attendance records will be kept and used to determine each person's qualification to sit for the final examination. In case of illness or other unavoidable cause of absence, the student must communicate as soon as possible with any of the instructors, indicating the reason for the absence.

Academic Integrity: Violations of academic integrity, including dishonesty in assignments, examinations, or other academic performances are prohibited. You are not allowed to make copies of another person's work and submit it as your own; that is plagiarism. All cases of academic dishonesty will be reported to the University Management for appropriate sanctions in accordance with the guidelines for handling students' misconduct as spelt out in the Students' Handbook.

Assignments and Group Work:Students are expected to submit assignments as scheduled. Failure to submit an assignment as at when due will earn you zero for that assignment.Only under extenuating circumstances, for which a student has notified any of the instructors in advance, will late submission of assignments be permitted.

Code of Conduct in Lecture Rooms and Laboratories: Students should turn off their cell phones during lectures. Students are prohibited from engaging in other activities (such as texting, watching videos, *etc*.) during lectures. No noise making during lectures

READING LIST

[2] Harry, W.E and Williams D.Y. (1992).*Principles of Fishery Science* .Second Edition. Comstock Publishing, Ithaca, London. 349p.

[4] Gupta S.K and Gupta P.C. (2006).*General and applied Ichthyology*.(*Fish and Fisheries)* Published by S. Chand & Company, India. 1133p.

[5]Adesulu E.A and Sydenham D.H.G (2007).*The Fresh water Fishes and Fisheries on Nigeria.* Macmillian Nigeria publishers, Nigeria. 397p

Legend
1- Available in the University Library
2- Available in Departmental/School Libraries
3- Available on the Internet.
4- Available as Personal Collection
5- Available in local bookshops.

COURSE OUTLINE

Week	Topic	Remarks
1	Course overview	During this first class, the students will be given an explanation of what the course looks like and what is expected of them.
2 & 3	Fish growth and development • Growth and food • Growth curve • Linear growth • Growth rate	This topic requires that the student understand the basis of fish growth
4 & 5	Determination of growth using • Spines • Scales • Otholiths • Opercula • Bones • Carbon dating	The students should understand the various methods used in age determination.
6&7	Reproduction and factors affecting both growth and reproduction in fish	Students should be able to establish the relationship between growth and reproduction.
8,9 &10	Structure of organs, tissues, cells and organelles related to their functional, nutritional, osmotic, ionic, respiratory and excretory homeostatis nerve and muscle physiology. • Fusiform shape • Compressed shape • Torpedo shape • Depression • Elongation Different shapes and designs of fish in relation to aquatic environment.	Students will be requested to submit an assignment. MID-SEMESTER TEST
11& 12	Growth and reproduction in shell fish and their measurements.	Students should understand growth in shell fish and their measurements.

13 & 14	Natural environmental adaptation and physiological basis for navigation, migration, respiration, reproduction, feeding, temperature, salinity and light.	Students will be divided into groups and given topics to submit.
15	REVISION	This is the week preceding the final examination. At this time, evaluation will be done to assess how far the students' expectations for the course have been met.