



THE FEDERAL UNIVERSITY OF TECHNOLOGY, AKURE

Department of Fisheries and Aquaculture Technology

FAT 307 - Pond Construction and Maintenance

COURSE PARTICULARS

Course Code: FAT 307

Course Title: Pond construction and Maintenance

No. of Units: 2

Course Duration: One hour of theory and three hours of practical per week for 15 weeks.

Status: Compulsory

Prerequisite: NIL

COURSE INSTRUCTORS

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COURSE DESCRIPTION

This course is designed mainly for students in Fisheries and Aquaculture. The course provides applied training on the construction and maintenance of ponds. This course will impart valuable skill to the students in order to enhance their hands-on construction and maintenance of ponds. Topics to be covered include Site selection and survey. Design and construction of earthen production, breeding, nursery ponds. Fish pond accessories - spillway, monks, water inlet, monk boards and screen. Construction of other fish culture enclosures (concrete tanks, cages, pens, raceways). Construction of simple hatchery units, drainage facilities, flow-through system for fish production. Maintenance of ponds, channels and drainage facilities. Fish farm design and facilities.

COURSE OBJECTIVES

The objectives of this course are to:

- Provide students with necessary skills for ponds site selection and survey.
- Enable students to design, construct and maintain fish ponds, ;
- Provide student with knowledge to construct fish cages, pens, raceways.
- Provide students with opportunities to develop pond construction skills.
- Enable students to design and construct fish cages, tanks and other fish enclosure structures;
- Provide students with opportunities to develop fish farm construction skills;
- Provide students with skills to design fish farm.
- Enable students to manage ponds, channels and drainage facilities

COURSE LEARNING OUTCOMES / COMPETENCIES

Upon successful completion of this course, the student will be able to:

(Knowledge based)

- Describe the features of fish ponds
- Classify ponds based on water source, means of drainage, construction materials, construction methods and use;
- Describe various types of ponds and their characteristics;
- Explain the various criteria for selection of site for ponds;
- Construct production, breeding and nursery ponds;
- Highlight the various maintenance measures for ponds, channels and drainage facilities;

Upon completion of the course the student will have skills in:

- Design and construction of ponds;
- Construction of fish pond accessories (Spillway, monks, water inlet, boards and screens);
- Construction of concrete tanks, cages and pens;
- Construction of simple fish hatchery units;
- Maintenance and management of ponds;
- Design of fish farms;

GRADING SYSTEM FOR THE COURSE

This course will be graded as follows:

Class Attendance	5%
Assignments	5%
Practicals	20
Test(s)	10%
<u>Final Examination</u>	<u>60%</u>
<u>TOTAL</u>	<u>100%</u>

GENERAL INSTRUCTIONS

Attendance: In this course every student is expected to be in class five minutes before the commencement of lectures and also partake in all practical trainings. Attendance will be taken in all lectures and practical sessions. The records will be kept and used to establish the suitability of the student to sit for the final examination. However, cases of illness or other inevitable cause of absence must be communicated to the course lecturer stating the reason for the absence.

Academic Integrity: Contravention of academic integrity, including dishonesty in assignments, examinations, or other academic performances is forbidden. 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 at when due. Failure to submit an assignment as scheduled will earn the student zero for that assignment. Late submission will only be allowed under justifying circumstances, for which the student has notified the lecturer.

Code of Conduct in Lecture Rooms, Laboratories and Fish Farm: Students are expected to attend lectures and practical sessions punctually. Silence must be observed in class. Students should turn off their cell phones during lectures and practical sessions. Food and drinks are not permitted in the laboratories.

READING LIST

^{2,3} Laughlin, T.L. 2008. Pond Construction for Freshwater Fish Culture. FAO Training series 1(20).

^{3,4} Gupta, S.K. and Gupta, P.C. (2010). General and Applied Ichthyology (Fish and Fisheries). S. Chand & Co. Ltd., 7361, Ram Nagar, New Delhi-110 055. 1133p.

¹ Muir, J.F. and Roberts, R.J. (1994). Recent Advances in Aquaculture. Blackwell Publishing Ltd. UK. 238p.

^{1,3} Pillay, T.V.R. and Kutty, M.N. (2005). Aquaculture Principles and Practices. Second Edition. Blackwell Publishing Ltd. UK. 624p.

Legend

1- Available in the University Library

2- Available on the Internet.

3- Available as Personal Collection

4- Available in local bookshops.

COURSE OUTLINE

Week	Topic	Remarks
1	Features of fish ponds Classification of fish ponds based on water source, means of drainage, construction materials, construction methods and use;	During this first class, the anticipation of the students from the course will also be documented. Students will be introduced to the importance of fish ponds and the various features of fish ponds.
2	Types of ponds and their characteristics.	This will involve highlighting the various types of ponds and their characteristics.
3 & 4	Criteria for selection of site for ponds. Site selection and survey.	This will involve survey of FUTA for selection of site for fish ponds.
5,6 & 7	Design and construction of earthen production, breeding and nursery ponds	Students will be divided into groups and given plots of land to construct nursery ponds after practical demonstration by the Lecturer/Technologist
8& 9	Construction of fish pond accessories	Practical exercise will involve construction of water inlet, monk boards and screens
MID-SEMESTER TEST		
10 & 11	Construction of concrete tanks, cages, pens and raceways	Practical demonstration will be carried out by the lecturer/Technologist.

12	Construction of simple hatchery units	Students will be taught different features of fish hatchery units.
13	Maintenance of ponds	Individual students will maintain their own ponds
14	Fish farm design and facilities	Students will design fish farm.
15	REVISION	This is the week before the final examination. At this time, assessment will be done to evaluate how far the students' expectations for the course have been met.