

Lecture plan for M.F.Sc. 2nd semester

Department of Fish Physiology and Biochemistry

Course: Nutraceuticals as Functional Foods

FPB 510 (1+1)

Sl No.	Lecture Topic	No of lecture
01.	Introduction to Functional Foods & Nutraceuticals: Definitions, Concepts & Scope	1
02.	Functional Foods vs. Nutraceuticals: Classification, Sources and Health Benefits	2
03.	Beneficial Roles of Functional Foods in Fish Health and Aquaculture	2
04.	Application of Functional Foods in Immune Modulation and Disease Prevention	1
05.	Characteristics of Nutraceuticals and Delivery Systems	1
06.	Nanotechnology in Nutraceutical Delivery Systems	1
07.	Biocompatible Polymers and Their Applications	1
08.	Probiotics: Definition, Types, Mode of Action and Benefits	1
09.	Prebiotics: Types, Mechanisms and Applications	1
10.	Synbiotics, Postbiotics, Stanols and Sterols	2
11.	Immunomodulatory Effects of Functional Foods	1
12.	Interrelationship between Stress and Growth in Fish	1
13.	Functional Feed Additives and Stress Mitigation	1
14.	Role of Functional Foods in Growth Enhancement and Disease Resistance	1
Total No of lectures		17
Practical		
01.	Extraction of Bioactive Compounds from Plant Materials	1
02.	In Vitro Antioxidant Assay (DPPH/ABTS/FRAP)	1
03.	Estimation of Superoxide Dismutase (SOD) Activity	1
04.	Estimation of Catalase (CAT) Activity	1
05.	Estimation of Glutathione Peroxidase (GPx) Activity	1
06.	Estimation of Lysozyme Activity	1
07.	Estimation of Nitroblue Tetrazolium (NBT) Reduction Activity	1
08.	Estimation of Myeloperoxidase (MPO) Activity	1
Total No of Practical		8

Course Teacher- Dr Sarvendra Kumar

