

Course Title: Protein Nutrition

Course No: FNT-508

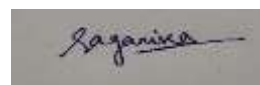
Course credit: 1+1

Theory

Sl. No.	Topics	No. of lectures
1	Introduction to protein nutrition in fish	1
2	Classification of protein sources, Conventional vs non-conventional sources	2
3	Protein sources of plant origin	1
4	Protein sources of animal origin	1
5	Non-protein nitrogen (NPN)	1
6	Protein requirement for maintenance, growth, and reproduction	1
7	Amino acids • Essential vs non-essential amino acids • Amino acid antagonism • Protein and amino acid deficiency symptoms	1
8	Factors affecting protein requirement	1
9	Protein-energy ratio (P/E ratio)- Concept, importance, and practical implications	1
10	Digestion of proteins	1
11	Absorption of amino acids • Mechanisms and transport	1
12	Amino acid metabolism	1
13	Amino acid pool and protein turnover	1
14	Protein quality evaluation methods	1
15	Kjeldahl nitrogen conversion factors, Ideal protein concept	1
Total no. of lectures		16

Practical

Sl. No.	Topics	No. of lectures
1	Extraction of protein	2
2	Microkjeldahl method	3
3	Estimation of protein by Biuret method	3
4	Estimation of protein by Lowry method	2
5	Estimation of protein by Bradford method	2
6	Total free amino acids	2
7	In vitro protein digestibility	2
Total no. of Practicals		16



Course Teacher
(Dr. Sagarika Swain)