

Lecture Plan of FPT-512 Fish By-Product and Waste Utilization

Sl. No.	Topic of theory	No. of lecture	Name of the Course Instructor
1.	Fish processing wastes and utilization: Overview of fish processing wastes, by catch and its composition. Liquid and solid wastes in fish processing. Bioremediation, anaerobic treatment, production of animal feed, biodiesel.	1	Dr. Md Aman Hassan
2.	Fish meal production (dry and wet process), nutritional importance and quality requirements, specifications, packaging and storage.	2	
3.	Fish body and liver oils, extraction, purification, preservation and storage, industrial and nutritional applications of fish oils.	1	
4.	Fish oil production of concentrates of polyunsaturated fatty acids, preparation of fatty alcohol and amides.	2	
5.	extraction of shark liver oil, squalene, shark cartilage; ambergris	2	
6.	Fish wastes and utilization as source of Protein recovery such as collagen, gelatin, extraction of enzymes.	2	
7.	Utilisation of Shellfish Waste as sources for conventional uses such as chitin, chitosan, glucosamine hydrochloride, carotenoids.	2	
8.	Fish protein hydrolysates- production and utilization, biochemical composition and importance in food and nutrition, functional properties of bioactive peptides;	2	
9.	Shellfish waste and its applications, biogas production from fish waste.	1	
10.	Novel products from fish waste and uses: Uses of Gelatin, Collagen, shark cartilage, Glucosamine, Carotenoids, Astaxanthin, Bioactive peptides	1	
TOTAL		16	

Sl. No.	Topic of practical	No. of lecture	Name of the Course Instructor
1.	Extraction of collagen from fish waste,	2	Dr. Md Aman Hassan
2.	Chemical and enzymatic extraction of gelatin from fish waste	2	
3.	Preparation of hydrolysates from fish wastes	1	
4.	Preparation of hydrolysates from shellfish wastes	1	
5.	Extraction of chitosan from shrimp shell waste.	2	
6.	Extraction of glucosamine from shrimp shell waste.	2	
7.	Recovery of fish oil from fish waste	2	
TOTAL		12	



Signature of Course Instructor