TECHNOLOGY OF MEAT, POULTRY AND FISH PRODUCTS

Course Code: 0811-2211	**Course Title:** Technology of Meat, Poultry and Fish Products	
Course Type: Compulsory	**Level/Term:** Level 3, Term 1	**Pre-requisite (s):** None
Credit: 3.0	**Contact Hours: 2.5 Hrs/Week**	**Total Marks: 100 (CIE: 35, SMFE:65)**

RATIONALE OF THE COURSE: This course is a basic structural course for Food and Nutrition Engineering to receive plenary and essential information on meat, poultry and fish processing to strengthen their future prospect. After completion of this course students are able to develop food processing laboratories with modern equipment, materials for food commodities and innovative functional food products in respect to consumers need.

Content of the Course:

Sl No	Course Content (as Summary)	Hrs	CLOs
1	Sources of meat and meat products in Bangladesh, its importance in national economy. Chemical composition and microscopic structure of meat and color of meat. Slaughtering of animals, inspection and grading of meat. Factors affecting post-mortem changes, properties and shelf-life of meat. Meat processing: curing and smoking; Fermented meat products (meat sausages & sauces); Frozen meat & meat storage; By-products from meat industries and their utilization; Meat industries in Bangladesh. Recent trends in meat processing.	**12**	**CLO1**
2	Sources of poultry and poultry products in Bangladesh, its importance in national economy. Chemical composition and microscopic structure of poultry. Inspection and grading of poultry meat. Factors affecting post-mortem changes, properties and shelf-life of poultry meat. By-products from poultry industries and their utilization.	**10**	**CLO2**
3	Structure, composition, nutritive value and functional properties of eggs and its preservation by different methods. Factor affecting egg quality and measures of egg quality.	**5**	**CLO3**
4	Sources of fish and fish products in Bangladesh, its importance in national economy. Classification of fresh water fish and marine fish; Commercial handling, storage and transport of raw fish; Average composition of fish; Freshness criteria and quality assessment of fish; Spoilage of Fish; Methods of Preservation of fish: Canning, Freezing, Drying, Salting, Smoking and Curing. Fish products - production of fish meal, fish protein concentrate, fish liver oil and fish sauce and other important byproducts; Quality control of processed fish.	**15**	**CLO4**

Course Learning Outcomes: At the end of the Course, the Student will be able to-

CLO1	Illustrate comprehensive understanding of meat composition, spoilage mechanisms, preservation methods, processing of meat-based products, and the utilization of by-products in the meat industry.
CLO2	Interpret the knowledge regarding poultry meat composition; spoilage, preservation and processing poultry base products as well as utilization of by-products of poultry industry.
CLO3	Demonstrate a thorough comprehension of fish composition, spoilage mechanisms, preservation techniques, the processing of fish-based products, and the utilization of by-products within the fish industry.
CLO4	Interpret the knowledge regarding eggs composition; spoilage, preservation and processing of egg base products as well as utilization of by-products of egg industry.

Mapping of Course Learning Outcomes to Program Learning Outcomes-

	PLO1	PLO2	PLO3	PLO4	PLO5	PLO6	PLO7	PLO8	PLO9	PLO10	PLO11
CLO1	√										
CLO2	√										
CLO3	√										
CLO4	√										

Mapping Course Learning Outcome (CLOs) with the Teaching-Learning and Assessment Strategy

CLOs	Teaching-Learning Strategy	Assessment Strategy
CLO1	Brainstorming Sessions, Voice over PPT, Lecture Video, Open Discussion	Feedback Session, Q/A session, H5P (Interactive Content), Quiz, Midterm Examination
CLO2	Voice Over PPT, Lecture Video, Interactive Session, Mind Mapping	Q/A Session, H5P (Interactive Content), Quiz, Midterm Examination, Assignment
CLO3	Voice Over PPT, Lecture Video, Interactive Session, Mind Mapping	Q/A Session, H5P (Interactive Content), Quiz, Final Examination, Assignment
CLO4	Voice Over PPT, Lecture Video, Interactive Session, Mind Mapping	Q/A Session, H5P (Interactive Content), Quiz, Final Examination, Assignment

ASSESSMENT PATTERN

CIE- Continuous Internal Evaluation (35 Marks):

Class Tests	15

Assignments	5
Presentation	8
Class Attendance	7

SMEE- Semester Mid and End Examination (65 Marks):

Bloom's Category	Midterm Exam (25)	Semester End Examination (40)
Remember	5	5
Understand	5	5
Apply	5	10
Analyze	5	10
Evaluate	5	10
Create		

LEARNING MATERIALS

Recommended Readings:

1. Meat & Meat Products Technology Including Poultry Products Technology by B.D Sharma.
2. Seafood Processing. 1st Edition. By V. Venugopal. ISBN: 978-1574446227
3. Egg and poultry meat processing; Stadelman WJ, Olson VM, Shemwell GA & Pasch S; 1988, Elliswood Ltd.

Supplementary Readings:

1. Developments in Meat Science – I & II, Lawrie R; Applied Science Pub. Ltd.
2. Egg Science & Technology; Stadelman WJ &Cotterill OJ; 1973, AVI Pub.
3. Fish as Food; Vol 1 & 2; Bremner HA; 2002, CRC Press.
4. Fish & Fisheries of India; Jhingram VG; 1983, Hindustan Pub Corp.