

Department of Food Sciences
University of the Punjab, Lahore
Course Outline



Programme	B.Sc. (Hons.) Food Science & Technology	Course Code	FST-304	Credit Hours	3(2-1)
Course Title	MEAT TECHNOLOGY				
Course Introduction					
<p>This course is designed to provide a comprehensive understanding of Basic knowledge of hygiene, nutrition, and quality assurance of meat. Understanding modern and conventional slaughtering processes. Understanding of various meat processing techniques.</p>					
Learning Outcomes					
<p>After completing this course student will be able to:</p> <ol style="list-style-type: none"> 1. Implement the knowledge of meat safety and meat preservation 2. Do carcass grade and secondary processing 3. Design effective packaging models and storage condition for meat and meat products 					
Course Content				Assignments/Readings	
Week 1	Unit-I				
	1.1 Meat Animals status in Pakistan				
	1.2 Factors influencing growth and development				
Week 2	Unit-II				
	2.1. Slaughtering process				
	2.2. Pre-slaughtering care and handling of meat animals.				
Week 3	Unit-III				
	3.1 Stunning methods				
	3.2 Bleeding methods – modern, Islamic, Kosher, Jhatka, others				
Week 4	Unit-IV				
	4.1 Meat carcass dressing				
	4.2 Meat carcass post-mortem changes				

Week 5	Unit-V 5.1 Carcass evaluation	
	5.2 Factors affecting quality of meat	
Week 6	Unit-VI 6.1 Preservation of beef and lamb by Chilling	
	6.2 Preservation of beef and lamb by freezing	
Week 7	Unit-VII 7.1 Preservation of beef and lamb by canning	
	7.2 Preservation of beef and lamb by curing	
Week 8	Unit-VIII 8.1 Preservation of beef and lamb by dehydration	
	8.2 Preservation of beef and lamb by salting	
Week 9	Unit-IX 9.1 Preservation of beef and lamb by smoking	
	9.2 Preservation of beef and lamb by irradiation	
Week 10	Unit-X 10.1 Physical Properties of meat	
	10.2 Chemical properties of meat	
Week 11	Unit-XI 11.1 Microbiological properties of meat.	
	11.2 Factors affecting quality of meat	
Week 12	Unit-XII 12.1 Nutritive value of processed meat	
	12.2 Nutritive value of raw meat	

Week 13	Unit-XIII	
	13.1 Quality assurance in meat industry.	
	13.2 Food safety in meat industries	
Week 14	Unit-XIV	
	14.1 Meat carcass dressing	
	14.2 Meat carcass post-mortem changes	
Week 15	Unit-XV	
	15.1 Slaughtering process	
	15.2 Pre-slaughtering care and handling of meat animals	
Week 16	Unit-XVI	
	16.1 Stunning methods	
	16.2 Bleeding methods – modern, Islamic, Kosher, Jhatka, others	
PRACTICAL		
Week 1	Identification of meat cuts.	
Week 2	Tests for freshness of meat.	
Week 3	Meat grading	
Week 4	Meat quality testing.	
Week 5	Preservation of meat by freezing.	
Week 6	Preservation of meat by canning	
Week 7	Preservation of meat by dehydration.	
Week 8	Preservation of meat by smoking.	

Week 9	Methods for the identification of meats Anatomical, Physical, Chemical	
Week 10	Tests for Quality of meat.	
Week 11	Meat grading	
Week 12	Preservation of meat by curing.	
Week 13	Preparation of meat products.	
Week 14	Sensory evaluation of meat	
Week 15	Tests for freshness of meat cuts.	
Week 16	Visit to abattoir and meat processing plants.	

Textbooks and Reading Material

1. Derrick, B. McCarthy. (2017). Meat and Meat Processing. Nova Science Publishers.
2. Kerry, J., Kerry, J. & Led ward, D. (2007). Meat Processing: Improving Quality. Wood head Publishing Ltd., Abington, Cambridge, England.
3. NIIR Board of Consultants and Engineers. (2005). Preservation of Meat and Poultry Products. Asia Pacific Business Press Inc., Kalma Nagar, Delhi.
4. Riaz, M.N. & Chaudhry, M.M. (2003). Halal Food Production. CRC Press, Taylor & Francis Group, Boca Raton, Florida, USA.
5. Pearson, A.M. & Gillett, T.A. (1997). Processed meats. Chapman & Hall, Inc., New York, USA..

Teaching Learning Strategies

Teaching will be a combination of class lectures, class discussions, and group work. Short videos/films will be shown on occasion.

Assignments: Types and Number with Calendar

The sessional work will be a combination of written assignments, class quizzes, presentation, and class participation/attendance.

Assessments and Examination

Sessional Work: 25 marks

Midterm Exam: 35 marks

Final Exam: 40 marks

Assessment

Sr. No.	Elements	Weightage	Details
1.	Midterm Assessment	35%	Written Assessment at the mid-point of the semester.
2.	Formative Assessment	25%	Continuous assessment includes: Classroom participation, assignments, presentations, viva voce, attitude and behavior, hands-on-activities, short tests, projects, practical, reflections, readings, quizzes etc.
3.	Final Assessment	40%	Written Examination at the end of the semester. It is mostly in the form of a test, but owing to the nature of the course the teacher may assess their students based on term paper, research proposal development, field work and report writing etc.