

Name of Faculty: - Mohit Jindal

Discipline: - Food Technology

Semester: - 3rd

Subject: - **3.4 TECHNOLOGY OF MEAT, FISH AND POULTRY PRODUCTS** (Theory & Practical)

Lesson Plan Duration: - 15 weeks (August-2025 to December-2025)

Workload (Theory / Practical) per week (in hours): Theory-02, Practical-04

Week 1

- **Day 1 (Theory):** Introduction to Indian Meat, Fish, and Poultry Industry
 - **Day 2 (Theory):** Structure, composition, and nutritive value of meat tissue
 - **Day 3 (Practical):** Demonstration of slaughtering and different meat cuts
 - **Day 4 (Practical):** Preparation of different types of meat products and their quality evaluation
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Week 2

- **Day 1 (Theory):** Postmortem changes – Loss of homeostasis, glycolysis, pH decline
 - **Day 2 (Theory):** Rigor mortis, Factors affecting meat quality
 - **Day 3 (Practical):** Demonstration of meat cutting and different meat cuts
 - **Day 4 (Practical):** Preparation of sausages and evaluation for acceptability and cost
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Week 3

- **Day 1 (Theory):** Meat quality parameters – Colour, Water Holding Capacity, Marbling
 - **Day 2 (Theory):** Slaughtering methods – Scientific and Ritual
 - **Day 3 (Practical):** To perform calculation of shape and size index of egg
 - **Day 4 (Practical):** Preparation of ready-to-cook poultry and its acceptability and cost evaluation
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Week 4

- **Day 1 (Theory):** Antemortem and postmortem inspection
 - **Day 2 (Theory):** Abattoir – Definition and Construction
 - **Day 3 (Practical):** Demonstration of retail cuts of dressed chicken
 - **Day 4 (Practical):** Perform calculation of the Haugh Unit of egg
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Week 5

- **Day 1 (Theory):** Basic preparatory procedures – Comminution, Emulsification, Pre-blending
 - **Day 2 (Theory):** Meat processing – Objectives of curing and ingredients
 - **Day 3 (Practical):** Measurement of the air cell of egg
 - **Day 4 (Practical):** Candling for internal quality evaluation of eggs
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Week 6

- **Day 1 (Theory):** Methods of curing – Dry, Brine, Combination
 - **Day 2 (Theory):** Smoking of meat – Objectives and types
 - **Day 3 (Practical):** Determination of effect of temperature on coagulation of egg protein
 - **Day 4 (Practical):** Preparation of egg powder, evaluation for acceptability and cost
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Week 7

- **Day 1 (Theory):** Sausage – Classification and processing steps
 - **Day 2 (Theory):** Canned Meat, Meat Pickles
 - **Day 3 (Practical):** Preparation of fish, meat, and egg pickles
 - **Day 4 (Practical):** Evaluation for acceptability and cost of meat/fish/egg pickle
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Week 8

- **Day 1 (Theory):** Poultry meat – Composition and nutritive value

- **Day 2 (Theory):** Characteristics of poultry meat
 - **Day 3 (Practical):** Demonstration of filtering & staking of fish
 - **Day 4 (Practical):** Determination of Iron sulfide formation in cooked eggs
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Week 9

- **Day 1 (Theory):** Pre-slaughter handling of poultry, inspection, and dressing
 - **Day 2 (Theory):** Factors affecting poultry meat quality
 - **Day 3 (Practical):** Preservation of whole egg
 - **Day 4 (Practical):** Determination of moisture & solid content of egg components
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Week 10

- **Day 1 (Theory):** Egg – Structure, composition, and nutritive value
 - **Day 2 (Theory):** Grading and spoilage of eggs
 - **Day 3 (Practical):** Determination of specific gravity of eggs
 - **Day 4 (Practical):** Revision of egg practicals
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Week 11

- **Day 1 (Theory):** Preservation of whole eggs
 - **Day 2 (Theory):** Preparation of egg powder – theory and importance
 - **Day 3 (Practical):** Practice on sausage or meat product making
 - **Day 4 (Practical):** Practice on poultry preparation techniques
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Week 12

- **Day 1 (Theory):** Fish – Classification, composition, nutritive value
 - **Day 2 (Theory):** Judging freshness of fish
 - **Day 3 (Practical):** Re-do any previous fish or egg experiment as per requirement
 - **Day 4 (Practical):** Practice candling, Haugh unit, and air cell
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Week 13

- **Day 1 (Theory):** Fish preservation methods – Canning, Salting
 - **Day 2 (Theory):** Freezing, Drying, Smoking
 - **Day 3 (Practical):** Revisit sausage or egg powder preparation
 - **Day 4 (Practical):** Practice measurement and calculations related to egg
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Week 14

- **Day 1 (Theory):** Fish products – Fish meal, liver oil, protein concentrate
 - **Day 2 (Theory):** Fish processing industries in India
 - **Day 3 (Practical):** Final revision of all practical techniques
 - **Day 4 (Practical):** Continue revision or conduct small assessments
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Week 15

- **Day 1 (Theory):** Frozen storage – Fresh and processed meat, poultry, fish
 - **Day 2 (Theory):** Recap of full syllabus – meat and poultry focus
 - **Day 3 (Practical):** Practice demo – student-led on selected practicals
 - **Day 4 (Practical):** Continue with second round of demo presentations
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Week 16

- **Day 1 (Theory):** Recap of full syllabus – egg and fish focus
- **Day 2 (Theory):** General doubt clearing, MCQ or Q&A discussion
- **Day 3 (Practical):** Internal revision test for practicals
- **Day 4 (Practical):** Internal revision test continuation or final practice