

**DISCIPLINE SPECIFIC CORE COURSE****DSC FT11: Poultry & Egg Processing Technology****CREDIT DISTRIBUTION, ELIGIBILITY AND PRE-REQUISITE OF THE COURSE**

Course title & code	Credits	Credit distribution of the course			Eligibility criteria	Pre-requisite of the course (if any)
		Theory	Tutorial	Practical/Practice		
Poultry & Egg Processing Technology	4	3	0	1	XII Pass with PCM/PCB	NIL

**Learning Objectives**

- To understand primary processing of poultry, chicken quality and by-product utilization.
- To understand HACCP models for poultry processing.
- To understand egg production practices, and egg preservation methods.
- To understand egg quality and development of value-added products.

**Learning Outcomes**

After completing this course, students will be able to:

- Understand the need and importance of egg and poultry industry.
- Comprehend egg production and poultry product processing.
- Acquire knowledge about application of HACCP model for poultry processing.
- Understand value-addition and by-product utilization

**SYLLABUS OF DSC FT011****THEORY****Credits: 3; Hours: 45****Unit 1 Introduction****5 Hours**

Unit Description: The unit will provide an understanding of the status and development of the Poultry industry, chicken quality, and processing of poultry and by-products.

*Subtopics:*

- Development of Poultry industry in India and its need in nation's economy,
- Chicken Quality - Color, Flavor, Texture, Water-Holding Capacity (WHC), Emulsification capacity.

**Poultry products processing****15 Hours**

- Primary processing of poultry,
- Inspection, Grading, Cut Up and Composition, ante-mortem and post-mortem inspection of poultry,
- A Generic HACCP model for poultry slaughter.
- Processing of enrobed poultry products, HACCP for a Cooked Product Model.
- Poultry by-products.

**UNIT II: Egg Industry and Egg Production Practices****12 Hours**

Unit Description: The unit will provide knowledge on the status and development of the Egg industry, and management of poultry farms.

*Subtopics:*

- The egg industry , Production of shell eggs
- Laying stock, Brooding period
- General management of Poultry farm.

**UNIT III: Quality identification of shell eggs****5 Hours**

Unit Description: The unit will provide an understanding of the factors that affect egg quality. Measures of egg quality will also be covered.

*Subtopics:*

- Grading of shell eggs
- Factors affecting egg quality
- Measures of Albumen and Yolk quality

**UNIT IV: Preservation of eggs****8 Hours**

Unit Description: The unit will provide information on the functional properties of eggs and different egg product processing and preservation techniques.

*Subtopics:*

- Refrigeration and freezing, egg powder manufacture, egg coatings.
- Functional properties of eggs and development of value-added products

**PRACTICAL**  
**Credit : 1, Hours: 30**

1. To study the shelf-life of eggs by different methods of preservation
2. Evaluation of eggs for quality parameters (market eggs, branded eggs)
3. To perform freezing of yolk/albumen
4. Egg product formulation.
5. Cut out analysis of canned chicken/retort pouches (external parameters).
6. Cut out analysis of canned chicken/retort pouches (internal parameters).
7. Planning generic HACCP model for poultry.
8. To prepare flow chart of enrobed chicken products/evaluate the quality of enrobed chicken products (chicken nuggets).

**Essential Readings**

- Shai, Barbut. (2016). *Poultry Products Processing. An Industry Guide*. CRC Press.
- Stadelman, W. J., Newkirk, D., & Newby, L. (2002). *Egg science and technology*. 4th ed. New Delhi: CBS Publication.
- Isabel Guerrero-Legarreta, Hui, Y.H .et.al.(2010)Handbook of Poultry Science and Technology, Volume 2:Secondary Processing. Wiley Publication

### **Suggested Readings**

- Owens, C. M. (2010). *Poultry meat processing*. CRC Press.
- Richardson, R.I.,Mead,G.C(2005)Poultry meat Science New Delhi:CABI Publishing
- Parkhurst, C., &Mountney, G. J. (1997). *Poultry meat and egg production*. New Delhi: CBS Publishers

**Note: Examination scheme and mode shall be as prescribed by the Examination Branch, University of Delhi, from time to time.**