

DISCIPLINE SPECIFIC ELECTIVE COURSE

DSE FT02 A: Bakery 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		
Bakery Technology	4	2	0	2	XII Pass with PCM/PCB	Nil

Learning Objectives

- To understand the fundamentals of baking and technology of various bakery products.
- To understand basic knowledge, importance, quality and safety concerns in bakery industry.
- To understand technology used in modified bakery products for different health conditions.

Learning Outcomes

After completing this course, students will be able to:

- Understand the fundamentals of baking.
- Acquire the knowledge of technologies of bakery products.
- Understand trends in bakery industry.
- Get an overview of modified bakery products for different health conditions

SYLLABUS OF DSE FT03

THEORY Credits: 2; Hours: 30

UNIT I: Introduction

5 Hours

- Bakery industry, current status and economic importance of bakery Industry in India.

- Nutritional quality and safety, pertinent standards & regulations, safety concerns

UNIT II: Bakery products **18 Hours**

- Bread, Buns and Pizza base: Ingredients & processes for breads, buns, pizza base, changes taking place during baking, product quality characteristics, faults and corrective measures
- Cakes: Ingredients & processes for cakes, product quality characteristics, faults and corrective measures. Different types of icings.
- Pastry: Ingredients & processes for pastry, product quality characteristics, faults and corrective measures.
- Biscuits and Cookies: Ingredients & processes, product quality characteristics, faults and corrective measures.

UNIT III: Modified bakery products **7 Hours**

- Modification of bakery products for people with special nutritional requirements e.g. high fibre, sugar free, low sugar, low fat, gluten free bakery products, use of fat and sugar replacers, enzymes, egg replacers and natural preservatives in bakery products.

PRACTICAL

Credit: 2, Hours: 60

1. Introduction of tools and equipment used in preparation of bakery products.
2. Quality assessment of wheat flour used in the preparation of baked products.
3. Preparation and acceptability of yeast leavened baked products (bread/ bun/ pizza base).
4. Preparation and acceptability of biscuits.
5. Preparation and acceptability of cookies.
6. Preparation of different types of cakes and their acceptability.
7. Preparation of different types of icings.
8. Development of any bakery product with special nutritional requirement.

Essential readings:

- Zhou, W., Hui, Y. H., Leyn, I. De., Pagani, M. A. , Rosell, C. M. , Selman, J. D., & Therdthai, N. . (2014). *Bakery Products Science and Technology* (Second ed.): John Wiley & Sons, Ltd.
- Dubey, S.C. (2007). Basic Baking 5th Ed. Chanakya Mudrak Pvt. Ltd.

Suggested readings:

- Khetarpaul, N. (2005). *Bakery Science and Cereal Technology*. India: Daya Publishing House.
- Edwards, W. P. (2015). *The Science of Bakery Products*. United Kingdom: Royal Society of Chemistry.
- Samuel, A. Matz (1999). *Bakery Technology and Engineering*. PAN-TECH International Incorporated
- Barndt, R. L. (1993). *Fat & Calorie – Modified Bakery Products*. US: Springer

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