

Bachelors in Arts with With Community Science
Category-V

**DISCIPLINE SPECIFIC ELECTIVE COURSE – DSE-FN 5-HSC:
INTRODUCTION TO BAKERY**

CREDIT DISTRIBUTION, ELIGIBILITY, PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical		
Introduction to Bakery	4	2	0	2	-	-

Learning Objectives

- To impart students' basic knowledge related to the principles of baking.
- To introduce them to the techniques and skills of cake and cookies making.

Learning Outcomes

The students would be able to:

- Describe the present and future trends of the bakery industry.
- Illustrate the basic ingredients and equipment used for baking along with their significance.
- Develop and demonstrate the skills of preparing, packaging and labelling of variety of cakes and cookies.
- Evaluate the quality of baked products.
- Initiate the entrepreneurial journey in the field of bakery.

THEORY
(Credits 2: Hours 30)

UNIT I: Baking Industry

6 Hours

This unit will introduce the students to the field of Food Bakery Science. It will also give information on safety aspects of Bakery products.

- Bakery - present trends and prospects
- Food safety aspects of baked products
- Packaging and labelling of baked products (FSSAI regulations)

UNIT II: Baking Ingredients and Equipment

8 Hours

The unit will focus on composition of wheat flour. It will also give information on bakery ingredients and equipment

- Composition of refined wheat flour (gluten, amylose/ amylopectin, enzyme activity, moisture) and its storage
- Importance of eggs, sugar, fats, leavening and other ingredients in bakery products
- Bakery Equipment- oven, mixing tools and accessories
- Gluten free flours

UNIT III: Cake Processing

10 Hours

The unit is about processing various types of cakes and their evaluation.

- Preparation of cakes - types of cakes, methods of batter preparation, steps in cake making, balancing of cake formula
- Evaluation of the baked cake, operational faults in cake processing and the remedial measures

UNIT IV: Cookies Technology

6 Hours

The unit is about processing of various types of cookies and their evaluation.

- Preparation of cookies - types of cookies (sheet, molded and dropped)
- Ingredients, processing, evaluation, faults and remedies

PRACTICAL (Credits 2, Hours 60)

1. Preparation of Sensory evaluation card (Hedonic scale) for various baked products.
2. Preparation, sensory evaluation, labelling and packaging of cakes.
 - Fatless sponge (pineapple sponge, chocolate sponge and Swiss roll)
 - Shortened cake (plain tea cake, Dundee cake, marble cake, fruit cake and innovative nutritious cakes)
 - Eggless cakes
3. Preparation, sensory evaluation, labelling and packaging of cookies.
 - Dropped cookies
 - Rolled cookies
 - Molded cookies
 - Innovative nutritious cookies
4. Market survey of innovative nutritious bakery products.
5. Preparation of any of the baked products in bulk and organizing an exhibition cum sale.

Essential Readings

UNIT I

This unit introduces students to the fundamentals of Food Bakery Science, including the principles and processes involved in bakery production. It also provides an understanding of the safety and quality aspects associated with bakery products.

- **Ketrapaul, N., Grewal, R.B., & Jood, S.** (2005). *Bakery Science and Cereal Technology*. Delhi: Daya Publishing House.
- **Matz A.** (2008). *Bakery Technology and Engineering*, 10th Edition, Delhi: CBS Publishers
- **Srilakshmi, B.** (2018). *Food Science*. Delhi: New Age International Publishers.

UNIT II

This unit focuses on the composition and functional properties of wheat flour. It also provides an overview of key bakery ingredients and equipment used in bakery production.

- **Dubey, S. C.** (2016). *Basic Baking-Science and Craft*. Delhi: Society of Indian Bakers.
- **Dubey, S. C.** (2009). *Bakery Vighan*. Delhi: Society of Indian Bakers.
- **Matz A.** (2008). *Bakery Technology and Engineering*, 10th Edition, Delhi: CBS

Publishers

- **Kent, N.L.** (2004). *Technology of Cereals*. London: Pergamon Press.

UNIT III

This unit covers the processing of various types of cakes and their sensory and quality evaluation.

- **Dubey, S. C.** (2016). *Basic Baking-Science and Craft*. Delhi: Society of Indian Bakers.
- **Dubey, S. C.** (2009). *Bakery Vighan*. Delhi: Society of Indian Bakers.
- **Matz A.** (2008). *Bakery Technology and Engineering*, 10th Edition, Delhi: CBS Publishers

UNIT IV

This unit covers the processing of various types of cookies and their sensory and quality evaluation.

- **Dubey, S. C.** (2016). *Basic Baking-Science and Craft*. Delhi: Society of Indian Bakers.
- **Dubey, S. C.** (2009). *Bakery Vighan*. Delhi: Society of Indian Bakers.
- **Matz A.** (2008). *Bakery Technology and Engineering*, 10th Edition, Delhi: CBS Publishers

Suggested Readings

- **Cornell, Hugh, J. & Hoveling, Alber. W.** (1998). *Wheat Chemistry and Utilization*, Delhi: CRC Press.
- **Edward, W. P.** (2007). *The Science of Bakery Products*. Cambridge: RSC Publishing.
- **Khanna, K., Gupta, S., Seth, R., Mahana, R., & Rekhi, T.** (2004). *The Art and Science of Cooking*. Delhi: Phoenix Publishing House Private Limited.
- **Raina, U., Kashyap, S., Narula, V., Thomas, S., Suvira, Vir, S., & Chopra, S.** (2005). *Basic Food Preparation – A Complete Manual*. Delhi: Orient Longman.

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

Bachelors in Arts with With Community Science Category-V

DISCIPLINE SPECIFIC ELECTIVE COURSE – DSE-FN 7-HSC: NUTRITIONAL BIOCHEMISTRY

CREDIT DISTRIBUTION, ELIGIBILITY, PRE-REQUISITES OF THE COURSE

Course Title & Code	Credits	Credit distribution of the course			Eligibility Criteria	Prerequisite of the course
		Lecture	Tutorial	Practical		
Nutritional Biochemistry	4	3	0	1	-	-

Learning Objectives

- To focus on the biological roles of key biomolecules including carbohydrates, proteins, lipids, vitamins, minerals and nucleic acids, as essential building blocks sustaining diverse life forms.