CVM UNIVERSITY
Aegis: Charutar Vidya Mandal (Estd.1945)

FACULTY OF ENGINEERING & TECHNOLOGY

Effective from Academic Batch: 2022-23

Programme: **Bachelor of Technology (Food Processing Technology)**

Semester: **VI**

Course Code: **202070601**

Course Title: **Bakery and Confectionary Technology**

Course Group: **Professional Core Course**

Course Objectives: This course will acquaint the students regarding the preparation of various bakery, sugar and chocolate confectionary products, their quality control, control of processing parameters and handling of equipment, which is essential for the students to perform efficiently and effectively in the industry

Teaching & Examination Scheme:

Contact hours per week			Course Credits	Examination Marks (Maximum / Passing)				
				Theory		J/V/P*		Total
Lecture	Tutorial	Practical		Internal	External	Internal	External	
3	0	2	4	50/18	50/17	25/9	25/9	150/53

* **J**: Jury; **V**: Viva; **P**: Practical

Detailed Syllabus:

Sr.	Contents	Hours
1	**Materials of Baking:** Wheat- Varieties, by-products of wheat milling, role of refined wheat flour; Leavening agents- Types, properties and their role; Shortenings- Role of shortening and forms used in bakery; Sweeteners; Role of emulsifiers and antioxidants, their types; Ingredients from milk and eggs- Introduction, role and types; Other ingredients: flavours and colours	10
2	**Bread Formulation and Processing:** Ingredients, details of manufacturing steps like fermentation, proofing, baking etc, Methods of bread preparation	10
3	**Cake Formulation and Processing:** Role of Ingredients, Cake formula, details of manufacturing steps, defects in cake - their causes and prevention	08
4	**Chocolate Confectionery**: Cocoa processing, details of confectionery manufacturing processes- grinding, refining, conching, tempering etc.	09
5	**Sugar Confectionery:** Introduction, classification of sugar confectionery, Processing of Hard boiled candy	08
	Total	42

List of Practicals / Tutorials:

1	Introduction to bakery equipment
2	Determination of ash content of the given sample of white wheat flour
3	Estimation of water absorption power and gluten content of the given flour
4	Determination of alcoholic acidity of the given sample of wheat flour
5	Determination of sedimentation value of white wheat flour
6	Determination of yeast quality by its dough rising capacity
7	Preparation of plain biscuit in laboratory
8	Preparation of egg less cake
9	Preparation of bread by straight dough method
10	Preparation of brown bread

Reference Books:

1	Bakery Technology and Engineering: Samual Matz
2	Bakery Science and Cereal technology: N. Khatarpaul, Grewal, Jood
3	Baking: Science and Industry: K.B. Kamaliya
4	Industrial Chocolate Manufacture: S.T. Beckett
5	Sugar Confectionery: Jackson and Lees

Supplementary learning Material:	
1	http://www.bakerybazar.com/2010/05/process-flow-chart-for-bread.html
2	https://food-science.uark.edu/
3	http://www.ddegjust.ac.in/studymaterial/pgdbst/pgdbst-06.pdf
4	http://www.nchm.gov.in/nchmct_adm

Pedagogy:

- Direct classroom teaching
- Audio Visual presentations/demonstrations
- Assignments/Quiz
- Continuous assessment
- Interactive methods
- Industrial/ Field visits
- Course Projects

Internal Evaluation:

The internal evaluation comprised of written exam (40% weightage) along with combination of various components such as Certification courses, Assignments, Mini Project, Simulation, Model making, Case study, Group activity, Seminar, Poster Presentation, Unit test, Quiz, Class Participation, Attendance, Achievements etc. where individual component weightage should not exceed 20%.

Suggested Specification table with Marks (Theory) (Revised Bloom's Taxonomy):

Distribution of Theory Marks in %						**R**: Remembering; **U**: Understanding; **A**: Applying; **N**: Analyzing; **E**: Evaluating; **C**: Creating
R	**U**	**A**	**N**	**E**	**C**	
19%	18%	20%	21%	22%	0%	

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes (CO):

Sr.	Course Outcome Statements	%weightage
CO-1	Understand the importance and role of various ingredients used in bakery and confectionary products.	**25**
CO-2	Understand the different methods of bread & cake making and their formulations.	**30**
CO-3	Understand the process of cocoa processing and chocolate manufacturing.	**25**
CO-4	Understand the different types of sugar confectionary products and their process.	**20**

Curriculum Revision:	
Version:	2
Drafted on (Month-Year):	June-2022
Last Reviewed on (Month-Year):	
Next Review on (Month-Year):	June-2025