



# GUJARAT TECHNOLOGICAL UNIVERSITY

Program Name: Bachelor of Engineering

Level: UG

Branch: Food Engineering & Technology

Subject Code: 3175106

Subject Name : Processing Technology of Beverages

WEF Academic Year :	2022-23
Semester :	7
Category of the Course :	Professional Elective-VI

**Prerequisite:** Nil

**Rationale:** This subject covers the processing, preservation, and packaging technologies of alcoholic and non-alcoholic beverages. It prepares students to manage quality, safety, and innovation in the beverage industry through modern processing techniques and regulatory compliance.

**Course Scheme:**

Teaching Scheme			Total Credits	Assessment Pattern and Marks				Total Marks
L	T	P		Theory		Practical		
			ESE (E)	PA(M)	ESE (V)	PA (I)		
3	0	2	4	70	30	30	20	150

**Course Content:**

Sr. No.	Course Content	No. of Hours	% of Weightage
1	History, importance of beverages and status of beverage industry, Processing of beverages,	5	15
2	Packaged drinking water, juice-based beverages, Synthetic, still, carbonated, low-calorie and dry beverages, isotonic and sports drinks, dairy based, alcoholic beverages fruit beverages, tea, coffee, cocoa, etc	8	20
3	FSSAI specifications for beverages, Ingredients, manufacturing and packaging processes and equipment for different beverages	10	25
4	Water treatment and quality of process water Sweeteners, colorants, acidulants, clouding and clarifying and flavouring agents for beverages Carbon dioxide and carbonation Quality tests and control in beverages	12	20
5	Miscellaneous beverages Coconut water, sweet toddy, sugar cane juice, coconut milk, flavoured syrups	8	20

**Reference Book:**

- Handbook of Alcoholic Beverages, Alan Buglass, John Wiley and Sons, 2011
- Food Flavourings P.R. Ashust Springer, 2012



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- Preservation of Fruit and Vegetable Products Girdharilal, Siddappa, Tondon Indian Council of Agricultural R
- Beverages: Technology, Chemistry and Microbiology Varnam and Sutherland Springer, 1994
- Manufacturing of Food and Beverages NIIR Board NIIR Publication, New Delhi

### **Suggested Course Practical List:**

1. Quality analysis of raw water
2. Determination of density and viscosity of caramel
3. Determination of colours in soft drinks by wool technique
4. Preparation of iced and flavoured tea
5. Preparation of carbonated and non-carbonated beverages
6. Determination of caffeine in beverages
7. Determination of brix value, gas content, pH and acidity of beverages
8. Quality analysis of tea and coffee, Preparation of miscellaneous beverages
9. Visit to carbonation unit
10. Visit to mineral water plant.

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