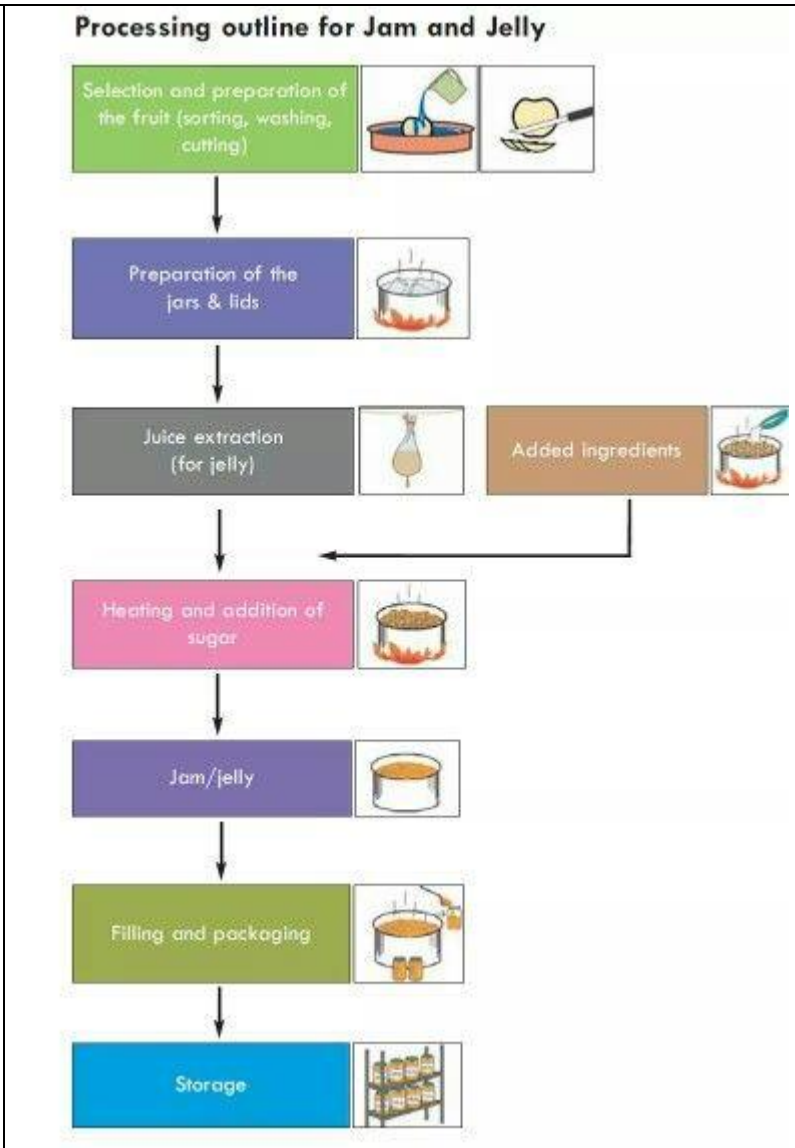
INNOVATIVE TEACHING-LEARNING (PEDAGOGY) REPORT

Title of the Activity	**Preparation of Vitamin rich Fruit Jam – Simulation-Based Product Formulation Activity**
Subject	**FT310E: Food Processing**
Department	**Food Technology**
Academic Year	**2024-25**
Name of the Faculty	**Prasanna Prakash Bhalerao**
Objective(s)	✓ To enhance understanding of jam formulation, particularly for vitamin C retention. ✓ To develop skills in ingredient-function matching and process planning. ✓ To promote critical thinking, teamwork, and decision-making in confectionery development.
Course Outcomes Addressed	✓ **CO1:** Understand principles of post-harvest technology. ✓ **CO2:** Identify and describe preservation methods. ✓ **CO3:** Analyze post-harvest losses and suggest solutions. ✓ **CO4:** Apply techniques to enhance food quality and shelf life.
Materials/Resources Required	✓ fruit pulp, pectin, citric acid, sugar, ascorbic acid, preservatives, etc.
Brief Description of the Activity	✓ Students are given a **"Product Brief"** – develop a **vitamin C-rich fruit jam** (e.g., Amla-orange or Guava). ✓ Teams choose ingredients and appropriate processing steps. ✓ They must justify their formulation and preservation strategy to minimize nutrient loss and optimize shelf life.
Learning Outcome	✓ Improved understanding of formulation components and processing effects on heat-labile nutrients. ✓ Ability to critically evaluate and justify food processing decisions. ✓ Enhanced teamwork and problem-solving skills.

Glimpses	

Processing outline for Jam and Jelly
Selection and preparation of the fruit (sorting, washing, cutting)
Preparation of the jars & lids
Juice extraction (for jelly)
Added ingredients
Heating and addition of sugar
Jam/jelly
Filling and packaging
Storage