



Dempo Charities Trust's

DHEMPE COLLEGE OF ARTS & SCIENCE  
Miramar, Panaji-Goa

Skill development programme for undergraduate students in Biotechnology:

Winemaking and Bakery

Duration: Three months

**Course Objectives:**

- 1) To train students for self-employment opportunities and promote entrepreneurship.
- 2) To enhance the practical skills of the students and provide hands-on experience in the field of food biotechnology.
- 3) To provide integrated learning for the students.

**Course Contents:**

**Wine Making:**

1. History of winemaking.
2. Types of wine and the process of fermentation for making the wine.
3. Hands on training on making wines from following food items:
  - a) Pineapple
  - b) Banana
  - c) Tomato
  - d) Beetroot
  - e) Rice
  - f) Watermelon
  - g) Orange
4. Importance of tartness, bite and aroma which gives the wines their characteristic flavour.
5. Estimation of total and volatile acidity of the wine via titration.
6. Process of bottling, packing and storage of the wines.

**Bakery:**

1. History of baking and bread making
2. Process of baking.
3. Hands on training on making following items:

- a) Bread (Grissini/Clover Leaf rolls/Baguette/Brioche)
- b) Welsh Cheesecake pastry/Shrewsbury biscuit/Swiss tarts
- c) Muffins (Blueberry/ chocochip/chocolava)
- d) Cake (red velvet/carrot/chocolate/banana cinnamon/carrot walnut/ribbon/vanilla)
- e) Doughnuts (stuffed/chocolate/sugar)
- f) Apple crumble pie/banoffe pie/serradura

**Learning outcomes:**

- a) After the completion of this course the students will be able to make wines using different types of fruits, vegetables and rice.
- b) They will be able to prepare different types of bakery products.
- b) They will be able to self-employ themselves in the areas of wine making and bakery.