

BACHELOR OF VOCATIONAL STUDIES
MODERN COLLEGE
(A DEGREE COURSE UNDER THE AGIS OF UGC AND NSQF)
Affiliated to Manipur University
Food Processing
PROGRAMME OUTCOME

After completing B.Voc Degree in Food Processing, the students will possess the basic skills associated with Food Processing.

BVFP-103: Introductory Microbiology

1. Be able to understand and classify the important groups microorganism involved in food.
2. Understand the principles involving food preservation as well as the method involved in food preservation.
3. Understand the source, types of micro organism in milk and milk product and their role in various milk product.
4. Be able to identify the important pathogens and spoilage microorganism in foods and the conditions under which they will grow.
5. Familiarisation with equipment and staining technique use microbiology lab.

BVFP-104: Food Chemistry

1. Know the chemistry underlying the physics, chemical properties of food.
2. Explain properties & functions of carbohydrates, lipids & proteins during processing of food and how they influence the quality & properties of the food.
3. Explain the role and effect of food colours and their contribution to acceptability of food.
4. Perform the measurement of TSS, under conductivity, pH, acidity, etc. of various food.

BVFP-105: Principles of Food Processing and Preservation

1. Introduce the students about the historical development of food processing.
2. Explain the principles in food processing and the methods involved.
3. Emphasize the preservation by high temperature, low temperature, dehydration, chemical fermentation and irradiations.
4. Provide practical exposure in preservation of syrups, squashes, juices, jams, jellies and pickles.

BVFP-203: Principles of Food Engineering & Quantitative Techniques in Food Processing

1. Introduce the students about food engineering and scope in agriculture and food engineering.
2. Explain the mode of heat transfer – conduction, convection, radiation.
3. Emphasize the kinetics of chemical reaction in food.
4. Provide practical exposure on study of heat exchangers, dryers, etc.
5. Provide practical exposure on measurement of pressure and fluid flow.

BVFP-204: Food Handling and Storage Engineering

1. Provide an overview of material handling system and devices in food processing plants.
2. Emphasize the design of various conveyors.
3. Give an account of refrigerated transportation of food material.
4. Explain the layout and design of storage structure.
5. Give a practical exposure of the study of bucket, belt, screw, and vibrated conveyers.

BVFP-205: Refrigeration & Air Conditioning & Boiler Technology

1. Illustrate the fundamental principles and application of refrigeration, air conditioning and boiler system.
2. Explain the principle of mechanical vapour compression refrigeration and cascade refrigeration system.

3. Understand the properties, application and environmental issue of different refrigerates.
4. Classify boiler, fire tube and water boiler and use in food industry.
5. Understand the fuel and their properties used in food industry.

BVFP-303: Technology of Dairy Products

1. Understand the composition and physics-chemical characteristics of milk.
2. Differentiate among pasteurized, whole, standardized, toned, double toned and skin milk.
3. Learn about cleaning and contamination of dairy equipment's.
4. Learn about the preparation of various dairy products.

BVFP-304: Cereals, Pulses & Oil Seeds Technology

1. Understand the composition, structure and processing characteristics of cereal group, legumes and oilseeds.
2. Learn about wheat and its baked products.
3. Learn about rice and processed rice products.
4. Learn about corn and legumes.
5. Learn about oilseeds and its processing.

BVFP-305: Food Packaging Technology

1. Understand the knowledge about packaging and various packaging media and material used in food industry.
2. Learn about packaging systems and methods.
3. Enumerate about packaging fresh and processed food.
4. Learn about packaging design and environmental issues in packaging.

BVFP-403: Dairy Engineering

1. Understand the concept of market milk.
2. Understand the processing of milk.
3. Learn about fortification of milk.
4. Learn about packaging and distribution of milk and milk products.
5. Understand the concept of process flow chart for product manufacture.

BVFP-404: Fruits, Vegetables Processing and Food Additives

1. Learn about the various unit operation involved in food industry.
2. Understand the technologies and packaging requirements of beverage, sauces, pickle, and other.
3. Learn about plant layout of fruit and vegetable processing industry.
4. Learn the general principles of food additive, preservative, emulsifier, sweetener, colouring agents, etc.
5. Enumerate various equipment for fruits and vegetables processing.

BVFP-405: Unit Operation in Food Engineering

1. Understand the principles of fluid flow heat transfer, heat exchanger, etc.
2. Learn about material handling.
3. Understand the principle of refrigerator.

BVFP-503: Baking & Confectionery Technology

1. Introduce about the statistics of bakery and confectionery industries in India.
2. Understand the technology of bakery, raw materials and quality proportion.
3. Understand the technology of bakery products – bread, biscuits, cakes, etc.
4. Learn about bakery machinery and equipment.

BVFP-504: Fermented Food Products

1. Learn about the concept and principle of fermentation and its types.
2. Understand about L.A. fermentation and alcoholic fermentation.
3. Understand the chemical and biochemical changes during matting and mashing.

BVFP-505: Project (Project Execution and Report)

BVFP-603: Technology of Meat & Meat & Poultry Products

1. Learn about meat and poultry industries in India.
2. Learn about slaughtering of meat, drip, post slaughter care post and mortem inspection.
3. Classify and quality of meat and meat product.
4. Learn the chemical composition and nutrition value of egg.

BVFP-604: Quality Control in Food Industry & Instrumentations

1. Emirate about hygiene regulation, personal hygiene and hygienic food handling.
2. Learn the principles of HACCP, Codex Alimentarius, ISO:9000 and ISO:14000 series.
3. Learn about quality testing.