Maratha Vidya Prasarak Samaj's

Karmaveer Shantarambapu Kondaji Wavare Arts, Science and Commerce College, CIDCO, Nashik

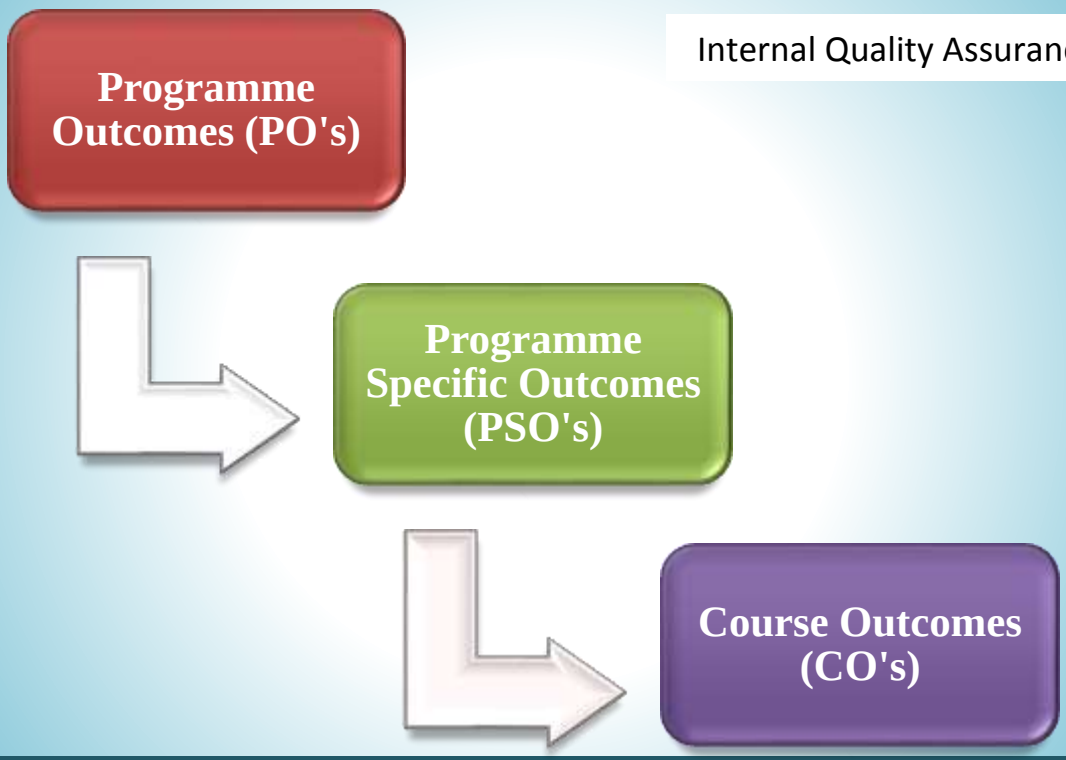
Uttamnagar, Nashik- 422 008 (Maharashtra)

Affiliated to Savitribai Phule Pune University Id. No. PU/NS/ASC/047/1993

AISHE C-42086 NAAC Re-accredited 'A' Grade (III Cycle 2017-22, CGPA 3.20)

Best College Award of Savitribai Phule Pune University Pune in 2009-10 and 2021-22

Internal Quality Assurance Cell



Syllabus: 2019 Pattern

Programme Outcome (PO's), Programme Specific Outcome (PSO's), Course Outcome (CO's)

Department: B.Voc Food Processing Technology

Sr. No.	Name of the Programme	Year of introduction of programme	Duration of introduction of Programme
1	B. Voc Food Processing	2018	3 Year

Programme Specific Outcome (B. Voc. Food Processing Technology)

Sr. No.	Programme Specific Outcome (B.Voc. Food Processing Technology)
PSO 1	This course has been started in order to make education relevant and to create 'Industry Fit' skilled workforce.
PSO 2	Students with vocational training can find work in several state and central government organizations, non-profit groups, and academic institutions and in private sectors as well.
PSO 3	Understand and commit to professional ethics and responsibilities and norms/regulation for manufacturing of process food and its effects on health.
PSO 4	To study grape composition and Grape processing products
PSO 5	To study how to be Food Preserved and methods
PSO 6	Compositional and Nutritional aspect of Animal foods and their products, methodology
PSO 7	To study the food packaging types and methods of packaging.
PSO 8	To study the microbiology of food and to understand the aseptic techniques
PSO 9	Basic concepts of plant layout and design with special reference to food process industries and Preparation of Food Processing plant Proposal
PSO 10	Types of beverages and their importance, methodology

Course Outcome (B. Voc. Food Processing Technology)

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
F.Y.B. Voc. Sem I	BVFP111 G	Personality development and Computer Fundamentals	CO 1: Awareness in the participants with regard to the different aspects of interpersonal
			CO 2: Analysis and their relative significance in the context of the functional effectiveness of organizations.
			CO 3: Students will have command on basic IT skills to use computer and internet facilities for their academic and holistic development purpose.
			CO 4: Student will learn how to operate MS office
			CO 5: Awareness about Internet
			CO 6: To get self-motivated
	BVFP111G	Personality development and Computer Fundamentals	CO 1: Communication Skills
			CO 2: CV Writing and Interview Techniques.
			CO 3: Teamwork and Leadership
			CO 4: Problem Solving and Conflict Resolution
			CO 5: Presentation Skills
			CO 6: Internet surfing
	BVFP11 2G	Fundamentals of food and nutrition	CO 1: To know the basic nutrient
			CO 2: To know how enzymes work
			CO 3: Concept of food and nutrition
			CO 4: Concept of balanced diet
			CO 5: Malnutrition
			CO 6: Biochemical changes in foods of plant and animal origin
	BVFP11 2G	Fundamentals of food and nutrition	CO 1: Development of low cost recipes for baby, pre-schoolers, adolescent, pregnant and lactating mother.
			CO 2: Estimations of cholesterol in foods
			CO 3: Separation and identification of amino acids by paper chromatography
			CO 4: Calculation of BMR and body surface area
			CO 5: Calculation of energy value of food
			CO 6: Planning and calculation of nutritive

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
			value of balanced diet for different age groups
	BVFP113G	Introduction to food processing	CO 1: Maturity standards of fruits and vegetables
			CO 2: Storage practices
			CO 3: Commercial processing of major fruits and vegetables
			CO 4: Fruit juice preparation
			CO 5: Drying and dehydration technology of fruits and vegetables- preparation of raisins, anardana, dried figs
			CO 6: Utilization of By-products and wastes from fruits and vegetables processing industry.
	BVFP113G	Introduction to food processing	CO 1: 1. Studies on maturity indices of fruits and vegetables.
			CO 2: Studies on extension of shelf life.
			CO 3: Studies on use of chemicals for ripening
			CO 4: Studies on pre-packaging of fruits and vegetables
			CO 5: Studies on physiological disorders - chilling injury of banana and custard apple
			CO6:Canning/bottling of mango/guava/papaya fruits.
F.Y.B.Voc. Sem II	BVFP121G	Grape processing and preservation	CO 1: Introduction to Grape Processing
			CO 2: Raisin Processing
			CO 3: Grape processing products
			CO 4: Grape Beverages
			CO 5: Packaging material and methods
			CO6: - Equipments used in beverage processing
	BVFP121G	Grape processing and preservation	CO 1: Selection of grapes for various grape products.
			CO 2: Determination of TSS.
			CO 3: Determination of pH and Acidity of grape
			CO 4: Preparation of Raisin from different variety of grapes
			CO 5: Preparation of grape juice
			CO 6: Preparation of grape RTS
	BVFP122G	Principles of food preservation	CO 1: Preservation by drying dehydration and concentration
			CO 2: Introduction to Food Preservation

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
			CO 3: Thermal Processing Methods of Preservation
			CO 4: Food preservation by use of Low Temperature
			CO 5: Preservation by radiation and chemical preservatives
			CO 6: Recent methods in preservation
	BVFP122 G	Principles of food preservation	CO 1:Demonstration of various machineries used in food processing.
			CO 2: Study of effect of blanching on quality of foods
			CO 3: Study of canning and bottling of fruits and vegetables
			CO 4: Preservation of food by high concentration of sugar i.e. preparation of jam
			CO 5: Preservation of food by using salt
			CO 6: Preservation of food by hurdle technology i.e. pickling by acid, vinegar or acetic acid.
	BVFP12 3G	Fish, Meat and Egg Processing technology	CO 1: Compositional and Nutritional aspect of Animal foods
			CO 2: Fish Processing
			CO 3: Meat Processing
			CO 4: Egg Processing
			CO 5: Products from Fish, Meat and Egg
			CO 6: Awareness of legal regulations related to meat, fish and eggs.
	BVFP123G	Fish, Meat and Egg Processing technology	CO 1: Meat processing- cutting, cleaning, storage, sanitation.
			CO 2: Handling and practice on meat processing equipment
			CO 3: Practical on canning, pickling, preservation of meat
			CO 4: To perform curing of meat
			CO 5: Production of dehydrated, canned, pickled fish, Fish meal protein, fish meal powder
			CO 6: Production methods of egg albumin, powder and other useful products from egg.
S. Y. B. Voc Sem III	BVFP23 1G	Fundamental of Food Biochemistry	CO 1: To study physiochemical properties of Water
			CO 2: To study about Carbohydrates properties
			CO 3:Proteins classification , Properties
			CO 4: Pigments, colours and flavours in food

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
			Fats and oil
			CO 5: Introduction and Scope of Microbiology
			CO 6: Microbial Taxonomy
	BVFP231S	Fundamental of Food Biochemistry	CO 1:Determination of vitamin C by titration method.
			CO 2: Determination of Protein by kjaldahl method.
			CO 3: Determination of fat by soxhlet apparatus
			CO 4: Quantitative estimation of Total sugars, reducing sugars.
			CO 5: Determination of Moisture and ash content in food
			CO 6: Determination of pigment in food
	BVFP232G	Basics of Food Packaging	CO 1: Introduction to Packaging
			CO 2: Deteriorative Reactions and Shelf life of Foods
			CO 3: Packaging Materials and their Properties
			CO 4: Special Packaging
			CO 5: Labelling and Safety Concerns in Food Pack
			CO 6: Edible packaging
	BVFP232 S	Basics of Food Packaging	CO 1:Study of different types of packaging and packaging materials.
			CO 2: To perform different destructive and non- destructive test for glass containers.
			CO 3: Determination of tensile strength of given material.
			CO 4: Determination of tearing strength of paper
			CO 5: Determination of water vapour transmission rate.
			CO 6: Determination of drop test of food packge.
	BVFP233G	Agro-Processing	CO 1: Paddy Processing
			CO 2: Rice Milling
			CO 3: Wheat Milling
			CO 4: Milling of Pulses
			CO 5: Processing of oil seeds
			CO 6: milling-break roll and reduction rolls.
	BVFP233	Agro-	CO 1: Determination of Physical properties

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
	S	Processing	of grains.
			CO 2: Determination of Moisture content of Flours.
			CO 3: Flour Analysis
			CO 4: Estimation of Starch in wheat flour
			CO 5: Study of drying of grains
			CO 6: Determination of average size of flour by using sieve analysis.
S.Y. B. Voc. Sem IV	BVFP241G	Bakery and confectionary	CO 1: Properties of wheat
			CO 2: Principles of baking and Bread manuf acturing
			CO 3: Cake and pastries manufacturing
			CO 4: Manufacture of different Biscuits
			CO 5: Confectionery
			CO 6: Pudding
	BVFP241 S	Bakery and confectionary	CO 1: Introduction to Bakery and Confectionery Equipments
			CO 2: Determination of Gluten content.
			CO 3: Preparation of Bread.
			CO 4: Preparation of brown bread.
			CO 5: Preparation of pizza base.
			CO 6: Preparation of Cake
	BVFP242G	Food quality assurance and control	CO 1: Introduction to Quality Attributes of Food
			CO 2: Gustation
			CO 3: Olfaction
			CO 4: Colour
			CO 5: Texture
			CO 6: Food Quality Laws and Regulations
	BVFP242 S	Food quality assurance and control	CO 1: Determination of crude fiber content of food.
			CO 2: Determination of Total Plate Count
			CO 3: Determination of Yeast and Mould Count
			CO 4: Detection of presence of coliform group of organisms in food.
			CO 5: Sensory analysis of food products
			CO 6: To perform sensitivity tests for four basic tastes.
	BVFP24 3G	Milk and milk product processing	CO 1: milk composition and milk constituents
			CO 2: Processing of Market Milk

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
			CO 3: Special Milks 7 Hours
			CO 4: Indigenous and Fermented Milk Products
			CO 5: In-Plant Cleaning System
			CO 6: pasteurization
	BVFP243 S	Milk and milk product processing	CO 1: Detection and Quantification of Starch in Milk
			CO 2: Determination of specific gravity of milk by using lactometer
			CO 3: Determination of Titrable Acidity of Milk and pH of milk
			CO 4: Determination of Fat and SNF content in milk.
			CO 5: Study on Separation of cream from milk
			CO 6: Study the pasteurization and sterilization process in detailed.
T.Y. B. Voc. Sem V.	BVFP 351G	Marketing, retail management and Entrepreneurship Development	CO 1: Marketing strategy in Food processing industry
			CO 2: Product and Brand Management
			CO 3: Entrepreneurial Development Programme
			CO 4: Setting up of micro, small and medium enterprises
			CO 5: Role of institutions/schemes in entrepreneurial development
			CO 6: Knowledge of the various procedures for starting a small-scale unit of production.
	BVFP 351S	Marketing, retail management and Entrepreneurship Development	CO 1: To collect different branded food items and their qualitative and quantitative comparison.
			CO 2: To conduct survey and prepare a report on consumer behaviour with respect to a particular product.
			CO 3: To study parameters of customer satisfaction.
			CO 4: To plan for industrial unit set up for a product.
			CO 5: To study advantages & disadvantages of on-line shopping

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
			CO 6: Case studies regarding marketing management
	BVFP 352G	Food spoilage and control	CO 1: Microscope and Microscopy
			CO 2: Sterilization
			CO 3: Food Preservation
			CO 4: Food Contamination and Spoilage
			CO 5: Food Borne Diseases
			CO 6: good hygiene practices in food processing industries for safe food.
	BVFP 352S	Food spoilage and control	CO 1: Laboratory orientation and familiarization with Laminar air flow, analytical balance, oven, incubator, colony counter, autoclave, laboratory shaker.
			CO 2: Demonstration of compound microscope
			CO 3: To perform streak plate techniques.
			CO 4: To perform spread plate techniques.
			CO 5: Isolation of microorganism from food samples.
			CO 6: To perform drying of given food material.
	BVFP 353G	Food industry waste management	CO 1: Characterization of food industrial wastes from Fruit and Vegetable processing industry,
			CO 2: Treatment Methods of Liquid Waste
			CO 3: Treatment Methods of Solid Wastes
			CO 4: Utilisation of waste
			CO 5: Utilization of the by- product in the food industry.
			CO 6: Waste disposal methods
	BVFP 353S	Food industry waste management	CO 1: Determination of BOD of water sample.
			CO 2: Determination of COD of waste sample
			CO 3: Determination of total suspended solids (TSS).
			CO 4: Determination of the total dissolved solids (TDS).

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
			CO 5: Determination of the volatile and non-volatile components
			CO 6: Flow process chart of food plant waste utilization processes
T.Y. B. Voc. Sem VI	BVFP 361G	Technology of Beverages	CO 1:Types of beverages and their importance
			CO 2: Manufacturing process of beverages
			CO 3: Types of coffee and tea
			CO 4: Alcoholic beverages
			CO 5: Packaged drinking water
			CO 6: equipments used for brewing and distillation
	BVFP 362G	Food processing plant designing and Documentation	CO 1: Basic concepts of plant layout and design with special reference to food process industries.
			CO 2: Plant Layout and Building
			CO 3: Documentation and inspection of raw material in food industry
			CO 4: Enterprise resource planning
			CO 5: Documentation of finished product detail
			CO 6: Knowledge of documents required for food industry
	BVFP 363G	Emerging Technologies in Food Industry	CO 1: Membrane separation process
			CO 2: High pressure processing and microwave heating
			CO 3: Irradiation and PEF and ohmic heating
			CO 4: Osmotic dehydration of foods and minimal processing
			CO 5: Nanotechnology
			CO 6: antimicrobial technology

Class	Subject code	Title	Cos: After successful completion of this course, student will be able to
T.Y. B. Voc. Sem VI	BVFP364S	Industrial/ Institutional project	CO 1: Improve personal inquiry, action and reflection on specific topics and issues..
			CO 2: Will enhance student's knowledge in food processing technology
			CO 3: Increase self confidence of the student and helps in finding their own proficiency
			CO 4: Cultivate student's leadership ability and responsibility to perform or execute the given task.
	BVFP365S	Preparation of Food Processing plant Proposal	CO 1: The project report to start new industry on food processing
			CO 2: To know the market position
			CO 3: To understand the expected future demand
			CO 4: To know the market size, statistics, trends, SWOT analysis and forecast.

HOD, B.Voc.
Food Processing
Technology

IQAC Coordinator

IQAC

Principal
Maratha Vidya Prasarak Samaj's
Karmaveer Shantarambapu Kondaji Wavare
Arts,science and Commerce College,
Uttamnagar,CIDCO,Nashik-422008