



Department of Food Technology List of PO
Title of Specific Program: B.Voc Food Technology

Program outcomes

- To prepare students as a qualified food technologist for Food industries, research organization and teaching.
- To provide students with a solid foundation in basic sciences related to food technology, food science and food technology & engineering.
- To enable the students with good scientific and engineering knowledge so as to comprehend, design, and create food products and device for food industry and provide solutions for the challenges in food industry as well as in agriculture.
- To train students in professional and ethical attitude, effective communication skills, teamwork skills and multidisciplinary approaches related to food technology and engineering.
- To provide student with an academic environment aware of excellence, leadership, written ethical codes and guidelines, and the life-long learning needed for a successful professional career.

B. Ghoshade
BOS
Chairman

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Program
Coordinator

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Principal



Department of Food Technology List of PSO
Title of Specific Program: B.Voc Food Technology

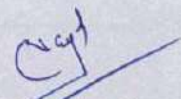
F.Y B.VOC

Program Specific Outcomes

PSO- 1	Students will understand the knowledge of food, food analysis, food spoilage and principles of food preservation, food QA and QC
PSO-2	Students will understand the knowledge of food, food analysis, food spoilage and principles of food preservation, food QA and QC
PSO-3	Students will understand the knowledge of food, food analysis, food spoilage and principles of food preservation, food QA and QC
PSO-4	Students will get the practical knowledge of bakery and confectionary technology to become an Entrepreneur to develop a skill in Entrepreneurship Development and Project Management.
PSO-5	Students will demonstrate knowledge of professional and ethical responsibilities
PSO-6	Students will understand the importance of preservation and economical value food


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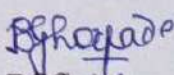


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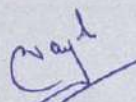
S.Y B.VOC

Program Specific Outcomes

PSO- 1	Graduate will able to focus on the importance of safe processed nutritious food.
PSO-2	Graduates will demonstrate an ability to design or process food products as per the needs and specifications.
PSO-3	Graduate will demonstrate skills to use modern tools and equipment to analyze food prone infection and food spoilage.
PSO-4	Graduates will demonstrate knowledge of professional and ethical responsibilities
PSO-5	Students will understand the Microbiological Importance in food for application in Industry.
PSO-6	Students will be understand to treat waste management of food industry
PSO-7	To develop a skill in Entrepreneurship Development and Project Management


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Department of Food Technology List of PSO
Title of Specific Program: B.Voc Food Technology

T.Y B.VOC

Program Specific Outcomes

PSO-1	Graduate will able to focus on the importance of safe processed nutritious food.
PSO-2	Graduates will demonstrate an ability to work in Food industries, research organization and teaching.
PSO-3	Graduates will demonstrate knowledge of professional and ethical responsibilities
PSO-4	Graduate will be able to understand economic importance of food products and food laws.
PSO-5	Graduate will understand Modern Technologies in food modification.
PSO-6	Graduate will be able to explain the range of processing operations used for preservation including thermal and non -thermal processing.
PSO-7	To understand the knowledge of technology of processing of Fruit and Vegetables, Physical properties of food, Food Processing and Equipment, Food Biotechnology and nutraceuticals, Unit operation in Food industry.
PSO-8	To gain the knowledge of Sensory Evaluation of Food

B. K. Kulkarni
BOS
Chairman

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**Programme
Coordinator**

[Signature]
Principal



Rayat Shikshan Sanstha's

Karmaveer Bhaurao Patil College, Vashi, Navi Mumbai

DEPARTMENT OF FOOD TECHNOLOGY

SEMESTER-I

Course Title: Communication Skills in English and computer skills

Course Code: UGFT -101

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Summarise ideas through various modes of communication. (2)
2. Justify the content of a reading or listening passage (5)
3. Describe behaviour and attitudes appropriate to a university environment (2)
4. Describe the content and support with relevant details (2)
5. Demonstrate and apply appropriate study skills for college success, including but not limited to annotation, note-taking, completion of assignments, and reflective journal writing.
6. Compare and contrast the main idea(s) from supporting detail (4)

Mishra

Course co-ordinator:

Course Title: Introduction to Food

Course Code: UGFT 102

Class: F.Y. BVOC.

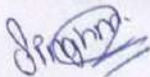
Course Outcomes:

Students will be able to:

1. Introduce the basic concepts and objectives of food science.[2] *
2. Classify and describe the different roles or functions of pigments and flavours used in food.[4] *
3. Classify the different types of food-based based on different sources.[4] *



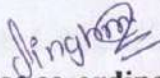
4. Understand the different traditional and modern methods of cooking.[2] *
5. Explain the basic concepts and objectives of cooking food.[4] *
6. Know the chemistry taking place between the food components during cooking. [2] *
7. Explain the terms used in food preparation. [1] *
8. Elaborate on different steps required to carry out before food processing.[3] *


Course co-ordinator:

Course Code: UGFTP 102

Students will be able to:

1. Introduce the lab practices and equipment used in the food lab.[3] *
2. Prepare the reagents used for the analytical experiments.[3] *
3. Study the GMP for food processing.[3] *
4. Perform different dry and moist heat cooking methods.[3] *


Course co-ordinator:

Course Title: Introduction to Food spoilage

Course Code: UGFT -103

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Compare and contrast the extrinsic and Intrinsic factors required for growth of microorganisms.[4] *
2. Infer the inhibitory substances affecting the microbial growth.[5] *
3. Illustrate the different types of food spoilage.[2] *
4. Summarize the various mechanism of food spoilage. .[2] *
5. Evaluate the shelf life of food by studying the microbial techniques performed in the laboratory.[5] *
6. Exemplify the bacterial and fungal food spoilage.[2] *
7. Justify the difference between food borne infection and intoxication.[5] *
8. Summarize the toxins produced by various bacteria and pathogens.[2] *



Course Code: UGFTP -103

Students will be able to:

1. Perform basic microbial techniques such as pour plate method, serial dilutions and sterilization of equipment.[3] *
2. Perform the streak and spread plate technique.[3] *
3. Study and identify microorganisms.[3] *
4. Enumerate the microorganisms.[3] *
5. Perform Grams staining method.[3] *
6. Study the Good microbiological laboratory practice.[3] *

Okadant
Course co-ordinator:

Course Title: Principles of Food Preservation-I

Course Code: UGFT -104

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Illustrate the preservation of food by using food preservation principles.[3] *
2. Apply techniques of removal of microorganisms by asepsis and maintaining an anaerobic condition.[5] *
3. Paraphrase the high-temperature technique of food preservation. To describe roles of high temperature in food preservation.[2] *
4. Justify the strategy for using moisture removal techniques in food preservation.[3] *
5. Study the applications of driers.[3] *
6. Apply the knowledge to understand the advantages and disadvantages of low-temperature techniques.[5] *

Course Code: UGFTP-104

Students will be able to:

1. Study and brief Introduction to drying equipment.[3] *
2. Study the applications of driers.[3] *

3. Study classification of food based on pH value and moisture content.[3] *
4. Perform storage by using different preservatives.[3] *
5. Perform Drying rate experiment for food products of drying method rate study in Industry.[3] *
6. Perform storage by using different preservatives.[3] *

Approved
11-12/21
Course co-ordinator:

Course Title: Bakery technology

Course Code: UGFT 105

Class: F.Y. BVOC.

Semester I

Course Outcomes:

Students will be able to:

1. Illustrate the importance of bakery in the market and the food industry.[4] *
2. To illustrate the importance of cereals and machines used in the bakery.[4] *
3. Diagrammatically understand the use of different machines and equipment used in the bakery industry. [4] *
4. Paraphrase how the bakery plant layout is made to structure properly.[4] *
5. Describe the role of good flour used in bread making. [2] *
6. Schematically and theoretically about the bread-making procedure.[4] *
7. Study about different types of dough used in bread manufacturing.[3] *

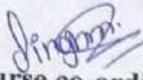
Course Code: UGFTP 105

Students will be able to:

1. Prepare bread, bun and bread roll, under close supervision, having limited skill requirements in a routine and predictable situation with the ability to select flour and other ingredients/food additives, using bakery machineries in a limited context. [3] *
2. Prepare cake like plain and fancy cake, flavoured cake, sponge cake, pineapple upside down cake, plum cake under close supervision, having limited skill requirements in a routine. [3] *



3. Understand the context of work and quality, and with the knowledge of basic facts and work processes, and with the responsibility for own work. [3] *


Course co-ordinator:

Course Title: Confectionary technology

Course Code: UGFT 106


Class: F.Y. BVOC.

Semester I

Course Outcomes:

Students will be able to:

1. Describe confectionery products. [2] *
2. Illustrate the characteristics of confectionary products [4] *
3. Describe the ingredients used in confectionery products with the role of each ingredient. [2] *
4. Schematically and theoretically illustrate on the different equipment and machineries used in confectionery products. [4] *
5. Diagrammatically describe the layout of confectionary plant [4] *
6. Summarise the in-depth processing of chocolate. [2] *
7. Schematically and theoretically illustrate the machinery used in the production of different confectionary products with the quality tests done for each type. [4] *
8. Theoretically illustrate the processing of various confectionery products like rock candy, lollypop, fudge, candy, toffee, etc [4] *


Course co-ordinator:



Course Code: UGFTP 106

Students will be able to:

1. Prepare biscuit/cookies like nankhatai, melting moments, golden cookies, tri-colour cookies, and butter biscuits, under close supervision, having limited skill requirements in a routine and predictable situation with the ability to select flour and other ingredients/food additives. [3] *
2. Describe bakery machineries in a limited context, understand the context of work and quality, and with the knowledge of basic facts and work processes, and with the responsibility for own work. [3] *

Course co-ordinator:

Course Title: Food Analysis.

Course Code: UGFT 107

Class: F.Y. BVOC.

Semester I

Course Outcomes:

Students will be able to:

1. Describe what are samples and the types of samples. [2] *
2. Summarise about different methods by which samples can be analysed. [2] *
3. Describe the different chemical constituents in food which deal with the quality of food. [2] *
4. Illustrate how moisture, ash, minerals are estimated in food products. [4] *
5. Illustrate on how lipids, fats, proteins are estimated in food products. [4] *
6. Illustrate on how acidity, starch, reducing sugars are estimated in food products. [4] *
7. Summarise the principle behind each estimation with the working principle of the equipment used for the estimation. [2] *
8. Paraphrase the significance of each analysis with the principle behind each analysis. [2] *



Course Code: UGFTP 107

Students will be able to:

1. Assess lab accuracy and precision. including safety review and chemistry essentials:[3] *
2. Proximate analysis of food's chemical aspects.[3] *

*Note: [1]: Remembering, [2]: Understanding, [3]: Applying, [4]: Analyzing.

[5]: Evaluating, [6]: Creating

Okadams

Course co-ordinator:



Semester II

Course Title: Entrepreneurship Development and Project Management

Course Code: UGFT-201

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Study the nature of entrepreneurship (3)*
2. Exemplify the function of the entrepreneur in the successful, commercial application of innovations (2)*
3. Schematically elaborate entrepreneurial leadership and management style. (4)*
4. Schematically elaborate basic managerial strategies (4)*
5. Describe the entrepreneurial practices in India (2)*
6. Design plans with relevant people to achieve the project's goals (6)*
7. Illustrate the physical resources required, and make plans to obtain the necessary resources (3)*

Approved
Course co-ordinator:

Course Title: Dairy Technology

Course Code: UGFT 202

Class: FY BVOC

Course Outcomes

Students will be able to:

1. Exemplify the standards and definitions of different types of milk according to FSSAI.[2] *
2. Compare and contrast between the various milk types based on its processing.[4] *
3. Infer the quality of milk by the grading system.[5] *
4. Solve analytical problems based on the standardization of milk by the Pearson method.[5] *
5. Paraphrase methods of CIP and SIP systems in the dairy industry.[3] *

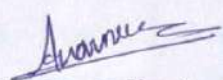


Course Code: UGFTP 202

Course Outcomes

The learner will be able to:

1. Prepare different types of dairy products such as dahi, shrikhand, butter, lassi, ghee, kulfi, paneer, khoa, basundi and rabri.[3] *
2. Perform tests for quality checking of milk.[3] *


Course co-ordinator:

Course Title: Packaging technology

Course Code: UGFT 203

Class: F.Y. BVOC.

Semester II

Course Outcomes:

Students will be able to:

1. Describe what is food packaging. [2] *
2. Justify the different functions of food packaging. [5] *
3. Describe levels of packaging and where which level is to be used. [2] *
4. Describe packaging materials in brief for each level of packaging. [2] *
5. Exemplify the different types of machinery used in food packaging with its working principles. [2] *
6. Paraphrase different tests to ensure that the packaging material conforms to all the standards. [2] *
7. Illustrate on novel packaging techniques like intelligent packaging, active packaging, edible packaging. [4] *
8. Illustrate on some special techniques like aseptic packaging, CAP, MAP, stretch packaging, shrink packaging. [4] *



Course Code: UGFTP 203

Students will be able to:

1. Describe different types of packaging and packaging materials. [2] *
2. Evaluate tensile strength of given material, wax weight, tearing strength of paper, bursting strength of packaging material, water-vapour transmission rate. [5] *
3. Analyse different destructive tests for glass containers and non-destructive tests for glass containers. [3] *
4. To Measure thickness of packaging material and grease-resistance test in plastic pouches. [5] *
5. Describe of can-seaming operation [2] *
6. To Testing of chemical resistance of packaging materials. [3] *

Jinghm

Course co-ordinator:

Course Title: Sanitation and Hygiene

Course Code: UGFT-204

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Describe the importance of sanitation in the food industry.[2] *
2. Describe the role of microorganisms in sanitation and information about them.[2] *
3. Illustrate how food is display and serving by following the sanitation and hygiene.[3] *
- Describe the handling of special food.[2] *
4. Describe the role of microorganisms in sanitation and information about them.[2] *
5. Justify the use of pest control water supply and fumigation technique n environmental sanitation.[5] *
6. Exemplify on role of regulatory agencies in sanitation in industry.[2] *



Course Code: UGFTP-204

Students will be able to:

1. Describe chemicals as sanitizers.[2] *
2. Comparison of different disinfectants.[3] *
3. Study calculation of MIC value of disinfectants used [3] *
4. Study uses of different fumigants.[3] *
5. Describe methods of personal hygiene.[2] *

Anamuc
Course co-ordinator:

Course Title: Principles of Food Preservation-II

Course Code: UGFT-205

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Compare and contrast different methods of food preservation traditional and modern.[4] *
2. Illustrate the importance of preservation of food by using chemicals as a preservative.[3] *
3. Describe different methods of food irradiation by using UV and pressure as a preservation technique.[2] *
4. Describe the role of class I and class II preservatives.[2] *
5. Justify that chemical preservatives and bio-preservatives role and difference.[3] *
6. Study how the different foods are preserved.[3] *

Course Code: UGFTP-205

Students will be able to:

1. Study storage of fruits by drying [3] *
2. Describe storage of fish by drying [2] *
3. Justify storage of vegetables by pickling [3] *
4. Describe storage of food by freezing [3] *



5. Study storage of foods by freeze-drying [2] *
6. Compare and contrast different methods of food preservation [4] *

Anamika
Course co-ordinator:

Course Title: Food Chemistry

Course Code: UGFT 206

Class: FY BVOC

Course Outcomes

The learner will be able to:

1. To study the different nutritive parameters [1] *
2. To know the mechanism of food constituents. [1] *
3. To study the classification of carbohydrates, proteins and lipids [1] *

Course Code: UGFTP 206

The learner will be able to:

1. To study the different nutritive parameters [1]*
2. To know the mechanism of food constituents. [1]*
3. To study the classification of carbohydrates, proteins and lipids [1]*

Course co-ordinator: Bhokute

Course Title: Food QA and QC

Course Code: UGFT-207

Class: FY B.VOC

Course Outcomes

Students will be able to:

1. Describe Total Quality Management and how it can be maintained. [2] *
2. Illustrate on different quality manuals, documentation and audits. [4] *
3. Summaries GLP, GAP, GMP, GHP. [2] *
4. Summaries food adulteration and food safety. [2] *



5. Describe different definitions of Quality. [2] *
 6. Describe different quality attributes like physical, chemical and microbial and sensorial. [2] *
 7. Illustrate on different testing methods to evaluate food quality. [4] *
 8. Theoretically and diagrammatically describe different instruments used for quality evaluation with their working principle. [2] *
- Paraphrase different ways of sensory evaluation of food products. [2] *

Course Code: UGFTP-207

Course Outcomes

Students will be able to:

1. Implement HACCP in dairy processing. [5]*
2. Develop FSMS plan for bakery industry [5]*
3. Determine quality control tests of packaged foods [5]*

*Note: [1]: Remembering, [2]: Understanding, [3]: Applying, [4]: Analyzing,
[5]: Evaluating, [6]: Creating

Okadani

Course co-ordinator:



Semester III

Course Title: Technology of Fish, Meat, and Egg Processing

Course Code: UGFT-301

Class: SY B.VOC

Course Outcomes

Students will be able to:

1. Illustrate on the classification, composition and spoilage of fish. [4] *
2. Describe what is a carcass, concept of red and white meat, composition of meat, post mortem changes in meat, rigor mortis and aging of meat. [2] *
3. Illustrate the different equipment and machineries used in meat, fish and egg industry. [4] *
4. Describe the colour, flavour, texture, water holding capacity and emulsification capacity of meat. [2] *
5. Illustrate the processing of Egg Products like Egg powder, frozen egg pulp, Designer eggs. [4] *
6. Diagrammatically and theoretically describe the working of different equipment used for the manufacturing of different products. [4] *
7. Paraphrase the different quality tests performed on various products to ensure whether it conforms to the quality or not. [4] *

Course Code: UGFTP-301

Students will be able to:

1. Evaluate the quality of fish/prawn. [5] *
2. Identify mercury from fish. [5] *
3. Describe moisture, protein content of meat. [2] *
4. Analyze frozen meat/meat emulsion products. [5] *
5. Study shelf-life of eggs by different methods. [3] *
6. Perform freezing of yolk/albumen. [3] *

Course co-ordinator:



Course Title: Technology of Spices and Plantation crops

Course Code: UGFT 302

Class: SY BVOG

Course Outcomes

The learner will be able to:

1. Infer the post-processing treatments in spice processing.[4] *
2. Understand the FSSAI regulations for spices.[3] *
3. Elaborate on chemistry of volatile.[2] *
4. Exemplify the synthesis of flavour identical.[3] *
5. Study the detailed process of value-added spice products.[2] *
6. Elaborate on the usage of spices and their products.[2] *

Course co-ordinator:

Course Code: UGFTP 302

The learner will be able to:

1. Identify and characterize the spices based on flavoring compounds.[3] *
2. Extract the oleoresins.
3. Estimate the piperine content in pepper.[3] *
4. Determine the curcumin content in turmeric.[3] *
5. Perform the chemical analysis of spices.[3] *
6. Study the standard specifications of spices.[3] *
7. Prepare curry powder.[3] *

Course co-ordinator:



Course Title: Food Microbiology

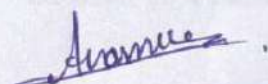
Course Code: UGFT-304

Class: SY B.VOC

Course Outcomes

Students will be able to:

1. Illustrate food microbiology from discovery to changes caused due to microorganisms in fermentation [3] *
2. Study the growth and survival of microorganisms in food.[2] *
3. Solve the problems caused due to microorganisms in food by physical and chemical methods to control.[5] *
4. Study the importance of microorganisms in food [2] *
5. Describe different theories of identification of microorganisms.[2] *
6. Study the factors which are act as intrinsic and extrinsic in microbial growth.[2] *
7. Justify OR potential inhibitory substances and biological structure.[2] *

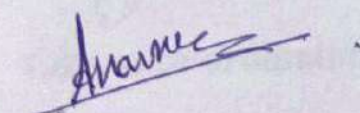


Course co-ordinator:

Course Code: UGFTP-304

Students will be able to:

1. Study the cultivation and sub-culturing of microbes [2] *
2. Describe the morphological study of fungi using permanent slides.[3] *
3. Perform simple staining and Gram's staining.[3] *
4. Study evaluation of TPC and CFU from meat or fish.[2]*
5. Study of shelf life by the optimization with temperature and time [3] *
6. Microbiology Laboratory Practices and Equipment.[3] *



Course co-ordinator:



Course Title: Food Additives and Flavour Technology

Course Code: UGFT 305

Class: SY BVOC

Course Outcomes

The learner will be able to:

1. Summarise the FSSAI regulations for food additive in food processing. [4] *
2. Analyse the safety evaluation of food additives. [5] *
3. Paraphrase the benefits and toxic effects of food additives. [4]
4. Describe the mode of actions of various food additives. [2] *
5. Summarise the FSSAI permissible limits for each type of food additive. [4] *
6. Illustrate on the process generated flavours in food products, stability of flavours during processing. [4] *

K. J. Somaiya

Course co-ordinator:

Course Code: UGFTP 305

The learner will be able to:

1. Estimate and describe fibers, colors, antioxidants, flavor enhancers in food products. [2] *
2. Isolate, modify and study about functional properties of native and modified proteins, starches and lipids. [3] *
3. Study extraction of essential oil and oleoresins; applications of additives and ingredients in foods. [3] *

K. J. Somaiya

Course co-ordinator:



Course Title: Business Management

Course Code: UGFT-306

Class: SY B.VOC

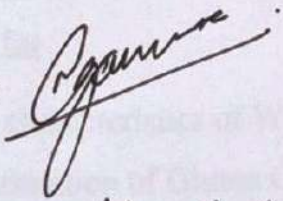
Course Outcomes

Students will be able to:

1. Describe the features and importance of planning (2)
2. Infer on the limitations of planning (5)
3. Perform the steps in the planning process; (3)
4. Schematically/diagrammatically elaborate Maslow's theory of hierarchy of needs and its application to the motivation of employees in an organization (4)
5. Summarize the complexities associated with management of human resources in the organizations and integrate the learning in handling these complexities (2)
6. Compare and Contrast between formal and informal organization (4)

*Note: [1]: Remembering, [2]: Understanding, [3]: Applying, [4]: Analyzing.
[5]: Evaluating, [6]: Creating

Course co-ordinator:


Mr. Nishu G. Gamare



Semester IV

Course Title: Technology of Cereals, Pulses, and Oilseeds

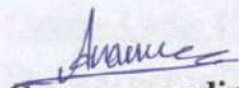
Course Code: UGFT-401

Class: SY B.VOC

Course Outcomes

Students will be able to:

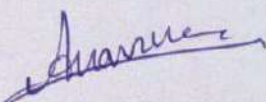
1. Summarise the composition and quality characteristics of paddy.[2] *
2. Describe and introduce the technique of paddy parboiling and further treatment of rice.[2] *
3. Describe the processing of different types of rice products.[2] *
4. Paraphrase FSSAI regulation for rice and wheat milling.[2] *
5. Describe all steps involve in wheat milling and their equipment.[2] *
6. Summarize the introduction and methods of oilseed processing.[2] *


Course co-ordinator:

Course Code: UGFTP-401

Students will be able to:

1. Study physical characteristics of Wheat.[2] *
2. Describe the estimation of Gluten Content of flour.[2] *
3. Study estimation of Potassium Bromate in flour.[2] *
4. Study fermenting power of yeast.[2] *
5. Describe the physical characteristics of Rice and paddy.[3] *
6. Study cooking characteristics of rice (Moisture).[3] *
7. Describe the determination of sedimentation power of flour.[2] *


Course co-ordinator:



Course Title: Technology of beverages

Course Code: UGFT 402

Class: SY BVOG

Course Outcomes

The learner will be able to:

1. Study the FSSAI regulations for non-alcoholic beverages.[3] *
2. Analyze the current status of the beverage industry in India.[4] *
3. Illustrate the decaffeination of coffee and recognize its importance.[2] *
4. Illustrate on FSSAI regulations for tea and coffee.[3] *
5. Exemplify on the equipment used in the processing of wine and beer.[2] *

Course co-ordinator:

Dr. D. D. D. D.

Course Code: UGFTP 402

The learner will be able to:

1. Study different food processing equipment used in beverage processing.[3] *
2. Prepare and preserve fruit juice.[3] *
3. Prepare vegetable juices.[3] *
4. Practically understand the beverage processing in a better way by visiting the beverage industry.[3] *

Course co-ordinator:

Dr. D. D. D. D.



Course Title: Food Product Design and Development

Course Code: UGFT 403

Class: SY BVOG

Course Outcomes

The learner will be able to:

1. Study the FSSAI regulations for product development.[3] *
2. Understand the importance and objectives of new product development.[2] *
3. Evaluate different methods used in the sensory analysis of the new formulated product.[5] *
4. Justify the strategies used in the commercialization of the product.[5] *
5. Evaluate the market trends and consumer preferences regarding the new product development.[5] *

Course Code: UGFTP 403

The learner will be able to:

1. Analyze the new product development with various aspects such as literature survey, processing, consumer preferences and market trends.[3] *
2. Standardize and formulate new product.[3] *
3. Perform the analytical methods for the quality check of the product.[3] *
4. Design the prototype of the product.[6]

Course co-ordinator:



Course Code: UGFT 404

Class: F.Y. BVOC.

Semester IV

Course Outcomes:

Students will be able to:

1. Describe what is plant layout, the influence of location on layout, ideal plant layout and location. [2] *
2. Describe location theory and modules like Weber's theory. [2] *
3. Summarise FSSAI regulations for plant design. [4] *
4. Illustrate the different types of layouts, advantages and disadvantages of each type. [4] *
5. Describe the piping and pumping system in food industries, types and working principles of each type of pump. [2] *
6. Describe about walls, doors, windows, drains in food industries, the materials used for the construction of the same with its placement. [2] *
7. Describe ventilation, illumination, fly control, mold prevention in the food industries. [2] *
8. Describe the flooring and foundation of food industries and on what the selection of these depends. [2] *

Course co-ordinator:

Course Code: UGFTP 404

Students will be able to:

1. Study the SCADA system, program logical system. (3) *
2. To prepare a plant location report. (4) *
3. Study, design and layout of cold storage and warehouse, milk processing plant, fruit processing plant, beverage plant, meat and meat products plant, bakery and confectionery plant, grain processing plant, cold storages and warehouses. (3) *

Course co-ordinator:



Course Title: By Product Utilization and Waste Management

Course Code: UGFT-405

Class: SY B.VOC

Course Outcomes

Students will be able to:

1. Compare and contrast between marketing and selling (4)*
2. Exemplify the role of marketing in the development of an economy in a firm, to the society and consumers. (2)*
3. Paraphrase the important functions of marketing (2)*
4. Compare and contrast the products into different categories (4)*
5. Forecast the factors affecting the price of a product (6)*
6. Exemplify strategies for developing new products and services that are consistent with evolving market needs (2)*
7. Illustrate the viability of marketing a product or service in an international market or markets. (3)*

Skadaw
Course co-ordinator:

Course Code: UGFTP-405

Students will be able to:

1. Study biological oxygen demand of waste water (4)*
2. Study chemical oxygen demand of waste water (4)*

Skadaw
Course co-ordinator:



Course Title: Marketing Management

Course Code: UGFT-406

Class: SY B.VOC

Course Outcomes

Students will be able to:

1. Compare and contrast between marketing and selling (4)*
2. Exemplify the role of marketing in the development of an economy in a firm, to the society and consumers. (2)*
3. Forecast the factors affecting the price of a product (6)*
4. Illustrate the viability of marketing a product or service in an international market or markets. (3)*
5. Design coordinated and collaborative processes and activities among the business partners in a supply chain, leveraging current and emerging technologies. (6)*
6. Construct a plan of warehouse and logistics operations for optimum utilization of resources. (4)*

*Note: [1]: Remembering, [2]: Understanding, [3]: Applying, [4]: Analyzing.
[5]: Evaluating, [6]: Creating

Sneha

Course Coordinator:



Semester V

Course Title: Processing of Fruits and Vegetables

Course Code: UGFT 501

Class: TY BVOG

Course Outcomes

The learner will be able to:

1. Acquire knowledge of the different physical, chemical and nutritional properties of fruits and vegetable-based products.[2] *
2. Acquire insight in the various chemical and biochemical changes which can influence the functional properties of the possible end products.[2] *
3. Identify the spoilage in fruits and vegetables and state the reason for the spoilage following safety precautions.[3] *
4. Classify the different types of preservatives used in fruits and vegetables processing industry.[4] *
5. Explain the technology used for extraction of juices from fruits.[4] *
6. Justify the use of appropriate technology corresponding to particular fruit or vegetable. [5] *

Course co-ordinator:

Course Code: UGFTP 501

The learner will be able to:

1. To study of graders and sorters used in food processing. [3] *
2. To prepare lemon squash. [3] *
3. To study and prepare strawberry jam. [3] *
4. To prepare garlic depth. [3] *
5. To studymaking of Jelly. [3] *
6. To prepare tomato ketchup and tomato puree. [3] *

Course Coordinator



Course Title: Physical properties of food

Course Code: UGFT-502

Class: TY B.VOC

Course Outcomes

Students will be able to:

1. Classify the rheological properties of food using different methods.[2] *
2. Illustrate on different methods to evaluate texture of food.[1] *
3. Understand the electrical and optical property importance and application.[2] *
4. Justify the reasons for the mechanical damage of food.[5] *
5. Evaluate the methods for detection of mechanical damage.[3] *

Shadani

Course co-ordinator:

Course Code: UGFTP-502

Students will be able to:

1. To design a product and explain its physical characteristics and the methods used to determine the same.[3] *

Shadani

Course Coordinator:

Course Title: Sensory Evaluation of Foods

Course Code: UGFT 503

Class: TY BVOC

Course Outcomes

The learner will be able to:

1. Illustrate the sensory evaluation (4) *
2. Describe how the human sensory perception, threshold psychophysics, tongue surface (2) *
3. Summarise classification of test methods used in sensory evaluation (4) *
4. Describe different methods or test of sensory evaluation differentiation. (2) *
5. Describe quality control and storage stability testing (2) *



6. Illustrate consumers acceptance testing (4) *

Course co-ordinator:

Course Code: UGFTP 503

The learner will be able to:

1. Illustrate the sensory evaluation (4) *
2. Describe the sensory evaluation of food by hedonic rating test (2) *
3. Summarise plan to set of sensory evaluation tests for a particular product. (4) *
4. Describe different tests used in sensory evaluation. (2) *

Course Coordinator:

Course Title: Food processing and equipment.

Course Code: UGFT 504

Class: T.Y. BVOC.

Semester V

Course Outcomes:

Students will be able to:

1. Illustrate the mechanism of heat generation (4) *
2. Describe the study of equipment's for HPP processing/ treatment. (2) *
3. Summarise the mechanism of PEF & other techniques used in thermal processing (3) *
4. Describe the types of irradiations its advantages and disadvantages of it. (2) *
5. Describe mechanism of non-thermal processing mechanism of food processing. (2) *
6. Illustrate the principle of mechanism of osmotic dehydration (4) *
7. Summarise the application and limitations of osmotic dehydration (4) *



8. Summarise the study of equipment functions of different refrigerators and illustrate the cooling tower, compressors and pneumatic valve (4) *

Course co-ordinator:

Course Code: UGFTP 504

Students will be able to:

1. Describe the comparison of conventional and microwave processing of food (2) *
2. Illustrate the preservation technique of process freezing. (4) *
3. Study the preservation techniques used in food. (3) *
4. Describe minimal processing of raw food. (2) *
5. Summarise the preservation of food by freezing. (4) *

Course Coordinator:

Course Title: Food Biotechnology and Nutraceuticals

Course Code: UGFT-505

Class: TY B.VOC

Course Outcomes

Students will be able to:

1. Describe nutraceuticals which is a novel dietary ingredient. [2]*
2. Illustrate the biological significance of nutraceuticals.[4]*
3. Illustrate on antioxidants, phytoestrogens, isoflavonoids, glucosinolates, carotenoids with its various health benefits and the role of the same in the body. [4]*
4. Describe what are probiotics, prebiotics and symbiotics. [2]*
5. Describe what are genetically modified foods. [2]*
6. Describe how probiotics and prebiotics can be used as infant foods and what form of it can be taken as infant foods [2]*



7. Describe various applications of nanotechnology in food industry [2]*
8. Describe what are nano materials and their characteristics. [2]*
9. Illustrate on what is food fortification and why is it needed. [4] *

Anamika

Course co-ordinator:

Course Code: UGFTP-505

Students will be able to:

1. Study ELISA technique [3]*
2. Detect GMO Foods [2]*
3. Prepare and evaluate pre biotic and pro- biotic [5]*
4. Determine pectin in plant material. [5]*
5. Identify various nutraceuticals and functional foods available in the market. [5]*

*Note: [1]: Remembering, [2]: Understanding, [3]: Applying, [4]: Analyzing.
[5]: Evaluating, [6]: Creating.

Anamika

Course Coordinator:



Semester VI

Course Title: Unit Operations in food industry

Course Code: UGFT 601

Class: T.Y. BVOG.

Course Outcomes:

Students will be able to:

1. Summarise different modes of heat transfer [4] *
2. Schematically describe the types of heat exchangers like PHE, tubular heat exchanger, scraped surface heat exchanger. [4] *
3. Describe the principle on which each type of heat exchanger works [2] *
4. Enlist the various food products which have the application of these heat exchangers in their processing [4] *
5. Illustrate on the different types of equipment's used in food industries for food processing. [4] *
6. Schematically explain types of distillation like simple, fractional, flash, steam and the principle as well. [4] *
7. Illustrate on solid liquid extraction and liquid - liquid extraction with the working mechanism and illustrate on super critical fluid extraction. [4] *
8. Describe what is separation and the different types of separation techniques. [2] *

Course co-ordinator:

Course Code: UGFTP 601

Students will be able to:

1. Study the working of hammer mill and crushing roll. [3] *
2. Study graders for grains, fruits and vegetables [3] *
3. Study different material handling equipment. [3] *
4. Study the working and principle of spray dryer [3] *
5. Study and perform centrifugal separation [3] *

Course co-ordinator:



Course Title: Food Quality Assurance

Course Code: UGFT-602

Class: TY B.VOC

Course Outcomes

Students will be able to:

1. Describe the importance of quality control and Quality management systems in food industry [2]*
2. Illustrate on the various sampling procedures and plans. [4]*
3. Illustrate on the various laws like FSSAI, BIS and the clauses covered in these laws [4]*
4. List down the various organizations dealing with inspection, traceability, certification [4]*
5. Describe what is HACCP [2]*
6. Enlist the 7 principles of HACCP [4]*
7. Summarise the various definitions of HACCP [4]*
8. Enlist the guidelines for the application of HACCP system [2]*

Skadam?

Course co-ordinator:

Course Code: UGFTP-602

Students will be able to:

1. Implement HACCP in dairy processing. [5]*
2. Develop FSMS plan for bakery industry [5]*
3. Determine quality control tests of packaged foods [5]*

*Note: [1]: Remembering, [2]: Understanding, [3]: Applying, [4]: Analyzing, [5]: Evaluating, [6]: Creating

Skadam?

Course co-ordinator:

B. Royade
BOS
Chairman

[Signature]
Programme
Coordinator

[Signature]
Principal