

SUBBALAKSHMI LAKSHMIPATHY COLLEGE OF SCIENCE

An Autonomous Institution

(Affiliated to Madurai Kamaraj University & Re-Accredited with B+ Grade by NAAC)

T.V.R. NAGAR, ARUPPUKOTTAI ROAD, MADURAI-22



Program Outcomes, Program Specific Outcomes & Course Outcomes

B.Sc Food Science and Processing Management

BATCH : 2019 -2020

Department of Food Science and Processing Management

Programme Code : FM1011

B.Sc Food Science and Processing Management

Programme Code : FM1011

ACADEMIC YEAR 2019-2020

(BATCH 2019 -2022)

Programme Outcomes (PO)

PO1. Knowledge base of Food Science and Processing Management (K2) : Understand the principles of food processing methods, nutritional properties of food and practices of recent advancements in food preservation.

PO2. Modern tool usage (K3). Make use of modern tools, instruments and equipments in food processing.

PO3. Product Standardization and development (K6). Develop a new food product with proper analysis and storage.

PO4. Team work communication and computer literacy (K4). Analyze and effectively communicate current issues and trends in food industry.

PO5. Ethical and professional understanding (K2). Understand the characteristics of ethical and professional standards of Food Processing industries.

PO6. Good Citizenship (K2). Understand the principles of Good Citizenship.

Programme Specific Outcomes (PSO)

The Programme Specific Outcomes of the B. Sc. Food Science and Processing Management degree are:-

PSO 1: To equip with the necessary technical Knowledge, skills and attitudes required to successfully contribute to solving problems related to food safety during food processing.

PSO 2: To enable the students to apply scientific principles in solving food processing problems and improving product quality and safety.

PSO 3: To develop new food products using modern equipments and tools.

Course Outcomes (CO)

SEMESTER - I

I.B.Sc Food Science and Processing Management

Semester	: I	Batch	: 2019-2022
Subject code	: 19BF103	Subject	: Fundamentals of Food and Nutrition
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

The student will be able to

- CO1. Define the basics of nutrition and the functions of food in healthy life sustenance.
- CO2. Classify food, nutrition during different conditions and role of special functional food.
- CO3. Identify and apply modern aspects of nutritional science and novel food usage.
- CO4. Analyze the dietary allowance for various age groups and formulate diet based on requirements.
- CO5. Categorize a menu based on the nutritional requirements of the individual.on requirements.

I.B.Sc Food Science and Processing Management

Semester	: I	Batch	: 2019-2022
Subject code	: 19BF104	Subject	: Principles of Food Science
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

The student will be able to

- CO1. Define the basic terms in food science and cereal grains.
- CO2. Apply the guidelines for preparation of specific foods using different food components.
- CO3. Identify the relationship between different food components and methods of cooking foods.
- CO4. Identify nutrient content of different non vegetarian foods.
- CO5. Classify and identify beverages, spices and aromatics and their functionality.

I B.Sc Food Science and Processing Management

Semester	: I	Batch	: 2019-2022
Subject code	: 19BF106	Subject	: Basic Food Preparation Practicals
Internal Marks	: -	External Marks	: 100
Part	: III	Credits	: 2

Course Outcomes:

The student will be able to

- CO1. Define the basic terms in food science and cereal grains.
- CO2. Apply the guidelines for preparation of specific foods using different food components.
- CO3. Identify the relationship between different food components and methods of cooking foods.
- CO4. Identify nutrient content of different non vegetarian foods.
- CO5. Classify and identify beverages, spices and aromatics and their functionality.

I B.Sc Food Science and Processing Management

Semester	: I	Batch	: 2019-2022
Subject code	: 19BF107	Subject	: Principles of Food Science Practical
Internal Marks	: -	External Marks	: 100
Part	: III	Credits	: 2

Course Outcomes:

The student will be able to

- CO1. Demonstrate methods to measure Moisture, Acidity & pH and TSS .
- CO2. Analyze the elements of carbohydrates.
- CO3. Understand the procedure for Kjeldhal analysis.
- CO4. Estimate Nutritional values
- CO5. Analyze quality of water.

LB.Sc Food Science and Processing Management

Semester	: I	Batch	: 2019-2022
Subject code	: 19BF105	Subject	: Food Chemistry
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 5

Course Outcomes:

The student will be able to

- CO1. Understand functions of Carbohydrates..
- CO2. Classify the functions and properties of Carbohydrates.
- CO3. Compare the functions and properties of Fats and Oils.
- CO4. Infer the functions and properties of Vitamins and Minerals.
- CO5. Recall the quality metrics of water.

Course Outcomes (CO)

SEMESTER - II

I B.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	: 19BF204	Subject	: Food Microbiology
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 4

Course Outcomes:

The student will be able to

- CO1. Understand the Structure and economic importance of Microorganisms.
- CO2. Utilize the methods of control and removal of Microorganism.
- CO3. Identify the microbial spoilage of food.
- CO4. Apply the benefits of Microorganisms in Food Industries.
- CO5. Explain and classify the food borne illness and intoxication.

I B.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	: 19BF203	Subject	: Food processing and preservation
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 2

Course Outcomes:

The student will be able to

- CO1. Explain the processing and preservation methods.
- CO2. Analyze the methods of drying and concentration.
- CO3. Utilize the thermal and non thermal processing.
- CO4. Classify the low-temperatures and fermentation.
- CO5. Explain types and advantages of preservation

I B.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	: 19BF207	Subject	: Food Microbiology practical
Internal Marks	: 40	External Marks	: 60
Part	: III	Credits	: 2

Course Outcomes:

The student will be able to

- CO1. Explain the Laboratory practice and identify the microbial slides.
- CO2. Utilize the modern techniques used in microbe identifications.
- CO3. Analyze the microbial growth in baked products and beverages.
- CO4. Analyze the microbial growth in raw and cooked food.
- CO5. Conclude the quality of milk

I B.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	: 19BF206	Subject	: Food processing and Preservation practical
Internal Marks	: 40	External Marks	: 60
Part	: III	Credits	: 2

Course Outcomes:

The student will be able to

- CO1. Examine the drying characteristics.
- CO2. Make use of salt and sugar for preservation.
- CO3. Make use of Chemical preservation.
- CO4. Apply the preventing and processing methods of fruits and vegetables.
- CO5. Develop the food preserve.

I B.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	: 19BF205	Subject	: Principles of Financial Operations
Internal Marks	: 25	External Marks	: 75
Part	: III	Credits	: 5

Course Outcomes:

The student will be able to

CO1: Understand the basic accounting concepts. (K2)

CO2: Prepare journal, ledger and trial balance. (K3)

CO3: Prepare final accounts. (K3)

CO4: Prepare cost sheet. (K3)

CO5: Determine breakeven point. (K3)

I B.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	: 19BF208	Subject	: Computer application practical
Internal Marks	: 40	External Marks	: 60
Part	: IV	Credits	: 2

Course Outcomes:

The student will be able to

CO1: Understand the basic computer skills such as power point, Word format and xl sheet. (K2)

CO2: Make use of MS Word, MS Excel and MS PowerPoint for Projects.(K3)

CO3: Understand the technologies and protocols used on the Internet. (K2)

CO4: Utilize Internet tools technologies including current web-based applications, e-mail, and social networking tools.etc (K3)

CO5: Create a power point presentation. (K6)

LB.Sc Food Science and Processing Management

Semester	: II	Batch	: 2019-2022
Subject code	:19ES210	Subject	: Environmental Studies
Internal Marks	: 25	External Marks	: 75
Part	: IV	Credits	: 2

Course Outcomes:

The student will be able to

- CO1: Understand the significances of Multidisciplinary nature of environmental studies (**K1**)
- CO2: Inculcate the concept of Natural resources and its associated problems (**K2**)
- CO3: Understand the concept of Environmental Pollution and its preventive measures (**K2**)
- CO4: Relate the Social Issues (**K2**)
- CO5: Build the Legal Awareness (**K3**)

COURSE OUTCOMES (CO)

SEMESTER III

Semester : III Batch : 2019-2022
Course code : 19BF301 Course Name : Cereals, Pulses and Oilseeds Processing
Internal Marks: 25 External Marks: 75
Part : III Credits 4

COURSE OUTCOMES:

The student will be able to

- CO1.Explain the processing methods of rice and barley.
- CO2.Determine the different processing techniques of wheat.
- CO3.Illustrate the milling of various millets.
- CO4.Examine the processing and by toxicity of pulses.
- CO5.Identify refining of protein concentrates, oils and their uses

Semester : III Batch : 2019-2022
Course code : 19BF306 Course Name : Cereals, Pulses and Oilseeds Processing
Practical

Internal Marks: 40 External Marks: 60
Part : III Credits 2

COURSE OUTCOMES:

The student will be able to

- CO1.Identify composition and nutritive value of cereal, pulses.
- CO2.Understanding the composition and nutritive value of foods.
- CO3.Examine the physical properties of cereals and pulses.
- CO4.Compare the quality of cereals and pulses.
- CO5.Experiment effect of physical properties on cooking.

Semester : III Batch : 2019-2022
Course code : 19BF302 Course Name : Fruits and Vegetables Processing
Internal Marks: 25 External Marks: 75
Part : III Credits 4

COURSE OUTCOMES:

The student will be able to

- CO1.Explain the harvesting and transportation indices of fruits and vegetables.
- CO2.Describe the post harvest handling of fruits and vegetables
- CO3.Collect the chemical, biological and nutritional properties of fruits and vegetables
- CO4.Estimate traditional and modern methods of preservation.
- CO5.Determine the modern processing technology.

Semester : III Batch : 2019-2022
Course code : 19BF303 Course Name : Bakery and Confectionaries
Internal Marks: 25 External Marks: 75
Part : III Credits 3

COURSE OUTCOMES:

The student will be able to

CO1.Explain basic terms and concepts of bakery and food preservation.

CO2.Apply bakery ingredients in baking processes and operations.

CO3.Illustrate different bread making methods and their characteristics

CO4.Determine the role of sugar in different baked recipes

CO5.Prepare cookies, cakes and chocolates

Semester : III Batch : 2019-2022
Course code : 19BF307 Course Name : Bakery and Confectionaries Practical
Internal Marks: 40 External Marks: 60
Part : III Credits 2

COURSE OUTCOMES:

The student will be able to

- CO1. Apply the role of each ingredient in baking
- CO2. Show basic steps in mixing of ingredients
- CO3. Demonstrate preparation of different yeast fermented products
- CO4. Develop flavored breads and buns
- CO5. Demonstrate preparation of different bread loaves

Semester : III Batch : 2019-2022
Course code : 19BF304 Course Name : Food Additives
Internal Marks: 25 External Marks: 75
Part : IV Credits 2

COURSE OUTCOMES:

The student will be able to

CO1.Explain the definitions in relations to food additives and toxicity

CO2.Chart the chemistry of the additives added to a food

CO3.Classify the functions of fat substitutes and replacers

CO4.Establish the importance of colourants, flavours and substitutes in improving food acceptability

CO5.Report the limits of addition as prescribed by FAO/WHO and PFA

Semester	: III	Batch	: 2019-2022
Course code	: 19BF308	Course Name	: Meal Planning & Balanced Diet
Internal Marks:	25	External Marks:	75
Part	: IV	Credits	2

COURSE OUTCOMES:

The student will be able to

- CO1. Explain the functions of foods in relation to health.
- CO2. Describe the food groups and their compositions
- CO3. Classify the different methods of cooking, their advantages and disadvantages.
- CO4. Distinguish the functions and sources of nutrients.
- CO5. Interpret the knowledge in maintenance of good health.

Semester	: III	Batch	: 2019-2022
Course code	: 19BF305	Course Name	: Food Safety and Hygiene
Internal Marks:	25	External Marks:	75
Part	: IV	Credits	2

COURSE OUTCOMES:

The student will be able to

- CO1. Describe the concepts of food safety and quality assurance
- CO2. Relate food safety and health
- CO3. Predict food hazards
- CO4. Apply hygiene and sanitation practices in food labs and industries
- CO5. Understand the quality improvement techniques