MANNAR THIRUMALAI NAICKER COLLEGE(Autonomous)

(An Autonomous Institution Affiliated to Madurai Kamaraj University)
(Accredited with "A" Grade by NAAC)
Pasumalai, Madurai -625004

DEPARTMENT OF FOOD AND DAIRY TECHNOLOGY
(For those who joined in 2017 and after)

Programme : UG | **Part III : Core**
Semester : V | **Hours per week : 05**
Subject Code : 17UFDC51 | **Credit : 04**

TECHNOLOGY OF DAIRY PRODUCTS

Course Outcomes:

After completion of the course, the students will be able to

CO1: Acquire knowledge on Milk and Milk products processing.
CO2: Study the working of equipments used in milk and milk products processing.
CO3: Expand the knowledge for preparation of different milk products
CO4: Enlighten processing methods of market milk.

Programme : UG | **Part III : Core**
Semester : V | **Hours per week : 04**
Subject Code : 17UFDCP5 | **Credit :04**

TECHNOLOGY OF DAIRY PRODUCTS-PRACTICAL

Course Outcomes:

After completion of the course, the students will gain expertise in the

CO1: Preparation of cream, butter and ice cream by using the appropriate machines
CO2: Analysis of various quality parameters of prepared dairy products.
CO3: Acquire the knowledge on platform and organoleptic test.
CO4: Enlighten the knowledge of fat rich products4

Programme :UG **Part III : Core**
Semester : V **Hours per week : 05**
Subject Code : 17UFDC52 **Credit : 04**

EFFLUENT TREATMENT AND ENVIRONMENTAL SAFETY

Course outcomes:

After completion of the course, the students will be able to

CO1: Disseminate the knowledge pertaining to waste water treatment in dairy plants.

CO2: Understand environmental issues and remedial measures in dairy industrial sector.

CO3: Get In-depth understanding of specialist bodies of knowledge within the environmental discipline.

CO4: Predict and characterize the likely impacts of pollutants on the environment

Programme : UG **Part III : Core**
Semester : V **Hours per week :**
04
Subject Code : 17UFDCP6 **Credit :**
03

EFFLUENT TREATMENT AND ENVIRONMENTAL SAFETY- PRACTICAL

Course outcomes:

After completion of the course, the students will be able to

CO1: Learn different methods of hazard analysis and control of hazards

CO2: Know about types of pollution, its sources, effects and control methodology and thereby environmental protection

CO3: Manage pollutants within environmental guidelines

CO4: Acquire pollution boards duties and responsibilities

Programme : F&D Tech **Part III : Core**
Semester : V **Hours per week : 04**
Subject Code : 17UFDC56 **Credit : 04**

DAIRY BY-PRODUCTS TECHNOLOGY

Course Outcomes:

After completion of the course, the students will be able to

CO1: Identify different milk by products

CO2: Describe different method of storage

CO3: Learn the efficient utilization of milk in Dairy industries.

CO4: Adopt different dairy product processing methods

Programme	**: UG**	**Part III**	**: Elective**
Semester	**: V**	**Hours per week**	**: 04**
Subject Code	**: 17UFDE51**	**Credit**	**: 04**

HUMAN NUTRITION

Course outcomes:

After completion of the course, the students will be able to

CO1: Learn the basic information about human nutrition.

CO2: Understand the factors that affect the human nutrition.

CO3: Know the nutritional and energy requirements of human beings at different stages of life, in the physiological situations associated with nutrition.

CO4: Learn how to carry out and interpret the nutritional assessment of an individual

Programme	**: F&D Tech**	**Part III**	**: Elective**
Semester	**: V**	**Hours per week**	**: 04**
Subject Code	**: 17UFDE52**	**Credit**	**: 04**

FOOD PACKAGING TECHNOLOGY

Course outcomes:

After completion of the course, the students will be able to

CO1: Understand packaging materials and its importance in food Industry

CO2: Adapt and utilize packaging materials for right application in Food Industry

CO3: Standardize testing methods for packaging material to assure quality

CO4: Consumer packaging: Important functionally, but not attitudinally

Programme	**:UG**	**Part III**	**: Elective**
Semester	**:V**	**Hours per week**	**: 04**
Subject Code	**: 17UFDE53**	**Credit**	**: 04**

PROCESSING OF MARINE PRODUCTS

Course outcomes:

CO1: After the completion of course, the students will be able to understand about the composition of marine products

CO2: Gain knowledge on the processing of marine and their by products

CO3: Examine the quality of marine products and quality issues in post production

CO4: Learn the different processing methods

Programme	**: UG**	**Part III**	**: Elective**
Semester	**: V**	**Hours per week**	**: 04**
Subject Code	**: 17UFDEP1**	**Credit**	**: 03**

HUMAN NUTRITION – PRACTICAL

Course Outcomes:

After completion of the course, the students will be able to

CO1: Understand the physiology of pregnancy and lactation and how these influence on nutritional requirements.

CO2: Understand the process of growth and development form birth until old age.

CO3: Get familiar with the nutritional needs at different stages of growth

CO4: Adequate knowledge on nutritional importants

Programme	**: UG**	**Part III**	**: Elective**
Semester	**:V**	**Hours per week**	**: 04**
Subject Code	**: 17UFDEP2**	**Credit**	**: 03**

FOOD PACKAGING TECHNOLOGY – PRACTICAL

Course outcomes:

After completion of the course, the students will be able to

CO1: Check Barrier properties of Packaging materials to avoid cross contamination with air, water and printing ink

CO2: Apply and examine the knowledge of properties for selection of packaging materials for foods & food products

CO3: Select between different techniques of food packaging

CO4: Adopt business applications in mind.

Programme	**: UG**	**Part III**	**: Core**
Semester	**: V**	**Hours per week**	**: 04**
Subject Code	**: 17UFDEP3**	**Credit**	**: 03**

PROCESSING OF MARINE PRODUCTS - PRACTICAL

Course outcomes:

After completion of the course, the students will be able to

CO1: Learn the sampling procedures

CO2: Adopt and handle testing methods.

CO3: Learn personal hygiene

CO4: Gain the knowledge of EIA-technology

Programme :UG **Part III : Core**
Semester : VI **Hours per week : 04**
Subject Code : 17UFDC61 **Credits : 03**

BAKERY AND CONFECTIONERY

Course outcomes:

The students will be able to

CO1: Adapt the standards and regulations followed in bakery and confectionary industry
CO2: Grasp basic knowledge about food ingredients and its used in bakery products
CO3: Utilize bakery unit processing machinery effectively
CO4: Adapt various process flow line in confectionary and bakery products

Programme : UG **Part III : Elective**
Semester : VI **Hours per week : 04**
Subject Code : 17UFDE61 **Credit : 03**

ENTREPRENEURIAL DEVELOPMENT PROGRAMME

Course outcomes:

The student will be able to

CO1: Understand the process and procedures for taking up entrepreneurial programmes.
CO2: Develop an attitude for Entrepreneurship development.
CO3: Understand different methods that can be used to minimize uncertainties at different stages of the entrepreneurial process
CO4: Understand different innovation and entrepreneurship theories and their implications
CO5: Understand the various scientific research methods commonly used to study innovation, entrepreneurship and new technology

.

Programme : UG **Part III : Elective**
Semester : VI **Hours per week : 04**
Subject Code : 17UFDE62 **Credit : 03**

POULTRY AND MEAT PROCESSING TECHNOLOGY

Course Outcomes:

The student will be able to

CO1: Gain Knowledge regarding processing methods and its importance in meat based Products
CO2: Gain Optimize Technology for processing of meat and its byproducts.
CO3: Knowledge regarding handling and transportation of meat and Fish.
CO4: Adopt preservation techniques and Packaging for poultry products.

Programme :UG **Part III : Elective**
Semester :VI **Hours per week : 04**
Subject Code : 17UFDE63 **Credit : 03**

FUNCTIONAL FOODS AND NUTRACEUTICALS

Course Outcomes:

The students will be able to

CO1: Understand about functional foods and its properties

CO2: Understand regarding Metabolic disorders and its relation with functional foods.

CO3: Learn the benefits of fortification in Food supplements

CO4: Understand the importance of Prebiotic and probiotic foods

Programme :UG **Part III : Core subject**
Semester : VI **Hours per week : 10**
Days: 60 (working days)
Subject Code : 17UFDPR1 **Credit : 10**

PROJECT AND VIVA – VOCE

Individual – 1 member

Record submission – A hard bound report to be submitted to the Department.

Evaluation – Project (oral) presentation followed by a brief Viva

Internal 40 Marks (Course teacher)

External 60 Marks (Course teacher and External members from other departments)

****

Programme : UG	**Part III : Core Project**
Semester : VI	**Hours : 12**
	Days: 60 (working days)
Subject Code: 17UFDINP	**Credits : 10**

INPLANT TRAINING

Each Group – 4 members

Area of learning – Raw material procurement, quality checking, processing & packaging methods.

Record submission – A hard bound report to be submitted to the Department.

Evaluation – Project (oral) presentation followed by a brief Viva

Internal 40 Marks (Course teacher)

External 60 Marks (Course teacher and an industrial person)

****

Programme : UG	**Part III : Core**
Semester : III	**Hours per week : 06**
Subject Code : 18UFDC31	**Credit : 05**

FOOD AND DAIRY PROCESSING TECHNIQUES

Course Outcomes:

CO1: To understand the science behind processing of foods and its impact on nutritive value of food stuffs.

CO2 : To provide in-depth knowledge on production of processed food products.

CO3 : To enable students to acquire skill in processing of various food items.

CO4: To improve the students entrepreneurial skill

Programme : UG	**Part III : Core**
Semester : III	**Hours per week : 04**
Subject Code : 18UFDCP3	**Credit : 03**

FOOD AND DAIRY PROCESSING TECHNIQUES – PRACTICAL

Course Outcomes:

CO1: To make the students familiar with operations in food and dairy units

CO2: To acquire knowledge on dairy processing techniques.

CO3: To enable the students familiar with food processing techniques.

CO4: To develop the skill involved in Food and Dairy Processing Techniques through doing the experiments.

Programme	**: UG**	**Part III**	**: Allied**
Semester	**: III**	**Hours per week**	**: 04**
Subject Code	**: 18UFDAP3**	**Credit**	**: 04**

SKILL DEVELOPMENT IN FOOD PREPARATION -PRACTICAL

Course Outcomes:

CO1:To develop the basic skills in food preparation**.**
CO2:To understand the principles of preservation in food preparation**.**
CO3: To develop entrepreneurial skills .
CO4: To improve this knowledge on preservation techniques.

Programme	**: UG**	**Part IV**	**: Skill**
Semester	**: III**	**Hours per week**	**: 02**
Subject Code	**: 18UFDS31**	**Credit**	**: 02**

FOOD PRODUCT DEVELOPMENT AND MARKETING

Course Outcomes:
CO1: To understand various aspects of development of a food product.
CO2: To acquire knowledge on the sensory evaluation of food products.
CO3: To impart knowledge on marketing and commercialisation of a product.
CO4: To enable them a good training skill in industry level.

Programme	**: UG**	**Part IV**	**: NME**
Semester	**: III**	**Hours per week**	**: 02**
Subject Code	**: 18UFDN31**	**Credit**	**: 02**

NUTRITION FOR HEALTH AND FITNESS

Course Outcomes:
CO 1: To understand the role of food and nutrients.
CO 2: To apply knowledge in the maintenance of health and disease processes.
CO 3: To provide theoretical enlightenment about fitness for life.
CO4: To develop skill in the aea of Nutrition for Health and Fitness.

Programme : UG	**Part III : Core**
Semester : IV	**Hours per week : 06**
Subject Code : 18UFDC41	**Credit : 05**

FOOD AND INDUSTRIAL MICROBIOLOGY

Course Outcomes:

CO1: To enable the students to understand the role of microbes in food, health and disease.
CO2: To study the microbes in relation to food spoilage, food borne diseases and food preservation.
CO3: To understand the different media used in microbial isolation and their differences.
CO4: To improve the hands on training in miuobiological labs.

Programme : UG	**Part III : Core**
Semester : IV	**Hours per week : 04**
Subject Code : 18UFDCP4	**Credit : 04**

FOOD AND INDUSTRIAL MICROBIOLOGY – PRACTICAL

Course Outcomes:
CO1: To obtain basic knowledge to operate all equipment in food microbiology laboratory effectively.
CO2: To isolate characterize micro organisms associated with different food products.
CO3: To equip the students in microbiological analysis of water and soil.
CO4: To improve hands on training.

Programme : UG	**Part III : Allied**
Semester : IV	**Hours per week : 04**
Subject Code : 18UFDA41	**Credit : 04**

FOOD SAFETY AND QUALITY CONTROL

Course Outcomes:
CO1: To enable the students to learn the various aspects of food safety and processing.
CO2: To understand about food laws and labeling.
CO3: To enable the students to apply the HACCP for food production.
CO4: To learn about the processing and packaging technique.

Programme	**: UG**	**Part IV**	**: Skill**
Semester	**: IV**	**Hours per week**	**: 02**
Subject Code	**: 18UFDS41**	**Credit**	**: 02**

FUNDAMENTALS ON MILK CHILLING MACHINERIES

Course Outcomes:

CO1: To provide engineering knowledge on constructions and operations related to chilling machineries.

CO2: To provide knowledge on mechanisms and working principles of chilling machineries.

CO3: To provide hands on training to handle the chilling machineries.

CO4: To give them knowledge on increasing the shelf life of the product.

Programme	**: UG**	**Part IV**	**: NME**
Semester	**: IV**	**Hours per week**	**: 02**
Subject Code	**: 18UFDN41**	**Credit**	**: 02**

FOOD PRESERVATION AND SAFETY

Course Outcomes:

CO 1 : To provide fundamental understanding of food spoilage and preservation.

CO 2: To equip with Commercial preservation technologies to maintain fresh and minimal processed food.

CO 3: To apply scientific knowledge on food safety.

CO4: To understand the skill in the area of food preservation and safety.