Semester	CourseCode	CourseCategory	Hours/ Week	Credits	MarksforEvaluation		
					CIA	ESE	Total
III	23UNDVAC1	VALUE ADDEDCOURSE	30			100	100
Course Title	VALUE ADDITION ON FRUITS AND VEGETABLE WASTE						

SYLLABUS		
Unit	**Contents**	**Hours**
I	**FoodWaste**:Introduction,wasteinfoodsupplychain,fruitswasteandbyproducts, vegetable wastes and its by product waste, biowaste	**6**
II	**Utilisation of fruits and vegetable waste to produce value added products:** Introduction, vegetable by-products, fruits-byproducts and biodegradable food packaging films	**6**
III	**Utilization of fruits and vegetable waste in food industries–**Introduction, ways to utilize the waste in value added products.	**6**
IV	**Food waste as Food Additives –** Role in modern diets, trends toward natural additives, sweetner, antimicrobial, colourantsand other additives	**6**
V	**Potential uses of fruits and vegetable wastes in human health:** Introduction, Nutritional and Bioactive potential of fresh fruits and Vegetable waste, Dietary uses of fruits and vegetable waste	**6**

*For Theory Core Course, wherever possible

TextBook(s):

1. B.Sivasankar,"FoodProcessing&Preservation,"PrenticehallofIndiaPvt.Ltd,NewDelhi,2002.
2.VijayKhader,TextbookoffoodscienceandTechnology,"IndiaCouncilofAgricultureResearch,NewDelhi ,2001.

ReferenceBook(s):

1.HariNiwas Mishra, Rajesh Kapur, Navneet Singh Deora, "Functional Foods", New IndiaPublishingAgency,India,2016.

WebResource(s):

1. Jonata M. Ueda *et al* .,Food Additives from Fruit and Vegetable By-Products and Bio-Residues: AComprehensive Review Focused on Sustainability, Sustainability 2022, 14,5212.https://www.mdpi.com/ journal/ sustainability
2. https://www.ncbi.nlm.nih.gov›articles›PMC7356603

Course Outcomes		
At the end of the course, students will be able to		
CO No.	**CO Statement**	**Cognitive Level (K-Level)**
CO1	Determine the food waste from fruits and vegetable globally	K3
CO2	Relate the industrial application of food product from fruits and vegetable wastes.	K3
CO3	Justify the value added products from food waste	K5
CO4	Distinguish the potential uses of value added product from food waste	K4
CO5	Evaluate the quality of food product for human health	K5

Course Coordinator: Dr. V. Kavitha

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
V	23UNDVAC2	Value Added Course	30			100	100

Course Title	PREBIOTICS AND PROBIOTICS

SYLLABUS		
Unit	**Contents**	**Hours**
I	Introduction of Functional food.Definition of Prebiotics , Characteristics and classification of Prebiotics: Fructans, Galacto-Oligosaccharides, Starch and and Glucose-Derived Oligosaccharides, Other Oligosaccharides, Non-Carbohydrate Oligosaccharides	**6**
II	Production of Prebiotics, Health Benefits of Prebiotics: Irritable Bowel Syndrome and Crohn's Disease, Colorectal Cancer,NecrotizingEnterocolitis, Prebiotics and the Immune System.	**6**
III	Definition of Probiotics ,Characteristics and classification of Probiotics: Types of Probiotics .Foods that are Super Healthy - Probiotics.Microorganisms considered as probiotics.	**6**
IV	Properties of Probiotic, Health Benefits of Probiotics: Antibiotic-AssociatedDiarrhoea, Infectious Diarrhoea, LactoseIntolerance, Probiotics and Allergy, Cancer and Probiotics .	**6**
V	Mechanism of Action of Prebiotics, Mechanisms of Probiotic Activity .	**6**

Text Book(s):

1. Watson RR, Preedy VR, Bioactive foods in promoting health: probiotics and prebiotics.

Academic Press, 2010.

2.Webb GP Dietary supplements and functional foods. John Wiley and Sons, 2011.

Reference Book(s):

1. Hari Niwas Mishra, Rajesh Kapur, Navneet Singh Deora, "Functional Foods", New India Publishing Agency , India, 2016.

2.Vasudha S and Mishra H N. (2013). Non dairy probiotic beverages. *International Food*

Research Journal 20(1): 7–15.

Web Resource(s):

1.https://www.healthline.com/nutrition/11-super-healthy-probiotic-foods

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	**CO Statement**	**Cognitive Level (K-Level)**
CO1	Remember about Functional Foods and its Sources	K1
CO2	Understand the effects of pre and probiotics on human health	K2
CO3	Apply the functions of prebiotics and probiotics in prevention of various disease condition	K3
CO4	List the types of prebiotics and probiotics	K4
CO5	Evaluate the effects of prebiotics and probiotics in Human Health	K5

Course Coordinator: A.Yasmin Fathimaa

Semester	Course Code	Course Category	Hours/ Week	Credits	Marks for Evaluation		
					CIA	ESE	Total
III	23PNDVAC1	Value Added Course	30			100	100

Course Title	PATIENT CARE IN EMERGENCY

SYLLABUS		
Unit	**Contents**	**Hours**
I	**EMERGENCY CARE** History of Emergency Medical Services, Emergency Unit, components of Emergency Medical Services, steps to be taken during medical emergency Pre hospital environment- factors affecting pre hospital care, pre hospital care intervention.	
II	**FIRST AID AND SAFETY** First Aid – Definition, aim, responsibilities of a first aider. Five basic steps of first aid. Basic Principles and rules. First aid in different cases – drowning, fainting, choking, athletic injuries, fire injuries and electric shock. Cardio pulmonary resuscitation technique – ABCDE approach.	
III	**COMMUNICATION AND TRANSPORT** Hospital communication during an emergency. Modes of medical transportation. Ambulance – types, service in India, Tamil Nadu. Top 10 equipments in ambulance, Advanced ambulance emergency service	
IV	**INTENSIVE CARE UNIT** Intensive Care Unit (ICU)– Meaning, importance, types, 3 levels of critical care. Early nutrition intervention, basics of metabolic changes and nutrition in critically ill patients, infections in ICU patients.	
V	**NUTRITION DURING CRITICAL ILLNESS AND POST HOSPITALISED CARE** Route of Nutrition(Enteral Vs Parenteral). Preference in critical care settings. Selection of appropriate enteral formula. Immune enhancing enteral nutrition, complications in enteral feeding. Discharge of the patient – meaning, purpose, guidelines, diet chart and patient education	

Web Resource(s):
1. http://gputtawar.edu.in/downloads/first-aid.pdf 2.https://www.icliniq.com/articles/first-aid-and-emergencies/prehospital-care-in-emergency-medicine 3.https ://cms.tn.gov.in/sites/default/files/go/hfw_e_240_2021.PDF 4. https://tnhsp.org/tnhsp/108-emergency-ambulance-services.php 5.https://suvitas.com/post-hospitalization-nutrition/ 6.https://assistinghands.com/9/ohio/cincinnati/blog/nutrition-after-hospital-discharge/ 7.https://www.bda.uk.com/uploads/assets/59fe265f-49df-4c0f-9ffe78993f20a26b/de96258a-2857-4bbe90654cc7fc8f80d5/Nutrition-in-hospital-after-critical-illness-FINAL-PDF-Version-June2020.pdf

Course Outcomes		
Upon successful completion of this course, the student will be able to:		
CO No.	**CO Statement**	**Cognitive Level (K-Level)**
CO1	Describe the Emergency Medical Services available in India	**K1**
CO2	Observe the patients and apply the appropriate first aid method	**K2**
CO3	Explain the patients in ICU and choose the nutrition care	**K3**
CO4	Select the right transport during medical emergency	**K4**
CO5	Recommend suitable diet plan for in and discharge patients with critical illness	**K5**

Course Coordinator: Dr. M. Angel