EVEN SEMESTER 2021-2022

TEACHING PLAN

A. General Information:

Name of the Faculty	:	Ms. V. Santhiya
Department	:	Marine Food Processing and Preservation Technology
Programme	:	I – B. Voc., Marine
Name of the Paper	:	Chilling Technology
Programme code	:	BVMEY
Practical Hours	:	6 Hrs / Week (Total Hours- 90 Hrs)

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• This course with the preservation of sea foods by chilling and freezing techniques. • At ambient temperature fish muscle undergo rapid biochemical changes and creates a favourable environment for microorganisms to grow. • This in turn responsible for the production of fouls smell and makes muscle spoiled and unsuitable for human consumption. • The main principle of chilling by ice is, it lowers the temperature of fish body from 30◦C to 5◦C. • This greatly affects the bacterial flora of fish and its growth is completely arrested by lowering of	• Explain the benefits of freezing and frozen storage of foods. • Describe and explain the importance of the typical steps in freezing and subsequent freezer storage and distribution of various liquid and solid foods. • Describe the important processes (freezing point depression, sub cooling, nucleation, growth and recrystallization) involved in freezing foods and the effects of different extrinsic and intrinsic parameters on freezing of foods. • Apply the phase/state diagram for various foods to freezing	• Students has to be in time for the laboratory • Students are not allowed into the lab without prepared Observation Note. • A student has to complete the practical and calculations at the stipulated time give to them. Students have to receive the signature in the observation note on the same day or on or before entering the next practical class

temperature and also slows down the biochemical activity, there by preserving quality to the extended time.	and freezer storage, with special attention to areas of equilibrium and non equilibrium. • Compare and contrast different freezing technologies in terms of process characteristics and quality changes during freezing of different foods.	

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Content-15Hrs, Assessment -3 Hrs Total - 18 Hrs	Sanitation and plant housekeeping Chilling and freezing equipment, instruments; packages and product styles	21-02-2022 to 28.02.2022	_	3 Hrs	_
	Methods of icing fish; cooling rate Preservation by chilled sea water	10-03-2022 to 21.03.2022	_	3 Hrs	_
	Freezing and thawing curves Freezing of different varieties of fish and shellfish.	01-04-2022 to 18.04.2022	_	3 Hrs	-
	Estimation of drip; Determination of quality changes during frozen storage.	20-04-2022 to 26.04.2022	_	3 Hrs	_

	Inspection of frozen fishery products Visits to ice plants, cold storages and freezing plants;	02-05-2022 to 08.05.2022	–	3 Hrs	–

c. ACTIVITIES

Activities Name	**Details**
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	02.05.2022 to 08.05.2022

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TEACHING PLAN

A. General Information:

Name of the Faculty	:	Ms. V. Santhiya
Department	:	Marine Food Processing and Preservation Technology
Programme	:	I – B.Voc., Marine
Name of the Paper	:	Fish Canning Technology
Programme code	:	BVMFY
Practical Hours	:	6 Hrs / Week (Total Hours – 90)

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• This course with the preservation of sea foods by canning and freezing techniques. • At ambient temperature fish muscle undergo rapid biochemical changes and creates a favourable environment for microorganisms to grow. • This in turn responsible for the production of fouls smell and makes muscle spoiled and unsuitable for human consumption. • The main principle of canning by ice is, it lowers the temperature of fish body from 30◦C to 5◦C.. • This greatly affects the bacterial flora of fish and its	• After completing this course students can able to, Deliver the different unit operations and its equipments involved in fish processing fishing resources. • Develop value added products from fish. Able to know about quality control of fish processing Know about different methods of processing of fish Able to acquire a confident to get placement in any fish processing industry. • Describe the important processes (Canning point depression, subcooling, nucleation, growth and recrystallization) involved in freezing foods and the effects of different extrinsic and intrinsic parameters on Canning of foods. • Apply the phase/state diagram for various foods to Canning and	• Students has to be in time for the laboratory • Students are not allowed into the lab without prepared Observation Note. • A student has to complete the practical and calculations at the stipulated time give to them. • Students have to receive the signature in the observation note on the same day or on or before entering the next practical class

growth is completely arrested by lowering of temperature and also slows down the biochemical activity, there by preserving quality to the extended time.	freezer storage, with special attention to areas of equilibrium and non equilibrium.	

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Content-15Hrs, Assessment -3 Hrs Total - 18 Hrs	Canning of commercially important fishes and shellfishes Preparation of Ingredients for canning	21-02-2022 to 28.02.2022	_	3 Hrs	_
	Preparation of Raw materials and sub-materials for canning Can cooling, labelling and storage	10-03-2022 to 21.03.2022	_	3 Hrs	_
	Measures of Heat resistance of Microorganisms	01-04-2022 to 18.04.2022	_	3 Hrs	_
	Estimation of Causes of spoilage in canned foods	20-04-2022 to 26.04.2022	_	3 Hrs	_
	Presentation of the product	02-05-2022 to 08.05.2022	_	3 Hrs	_

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	02-05-2022 to08.05.2022

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TEACHING PLAN

A. General Information:

Name of the Faculty	:	Ms. V. Santhiya
Department	:	Marine Food Processing and Preservstion Technology
Programme	:	I – B. Voc., Marine
Name of the Paper	:	Allied Practical – General Food Chemistry
Programme code	:	BVMA2Y
Practical Hours	:	6 Hrs / Week (Total Hours-90 Hrs)

B. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• To provide an optimum environment for students to gain an understanding of the chemical bases of food component reactivity and functionality. • To provide an opportunity for students to develop skills for experimenting with food systems and to test various approaches for manipulating the chemical and/or functional properties of foods. • To provide students an	• Students will be able to name and describe the general chemical structures of the major components foods (water, proteins, carbohydrates, and lipids). • Students will be able to give a molecular rationalization for the observed physical properties and reactivity of major food components. • Students will be able to provide a theoretical explanation for observed extents and rates of reactions that are common to foods • Students will be able to predict how changes in	• Students has to be in time for the laboratory • Students are not allowed into the lab without prepared Observation Note. • A student has to complete the practical and calculations at the stipulated time give to them. • Students have to receive the signature in the observation note on the same day or on or before entering the next practical class

opportunity to enhance and test their critical thinking skills through structured problem solving. • To provide an opportunity for students to develop skills for experimenting with food systems and to test various approaches for manipulating the chemical and/or functional properties of foods. • To provide students an opportunity to enhance and test their critical thinking skills through structured problem solving.	overall composition are likely to change the reactivity of individual food components. • Compare and contrast different Biochemical technologies in terms of process characteristics and quality changes during Biochemical technologies of different foods	

C. PLAN OF THE WORK:

Unit/ Modules	Topic to be Covered	Proposed date	Lecture Hours	Practical	Remarks
Content-15Hrs, Assessment -3 Hrs Total - 18 Hrs	Estimation of moisture content in fish sample by hot air oven method, Estimation of total Nitrogen and Protein Content of Fish by Microkjeldahl Method	21-02-2022 to 28.02.2022	–	3 Hrs	–
	Estimation of Crude Fat of Fish by Soxhlet Method Determination of Ash in Fishery Products	10-03-2022 to 21.03.2022	–	3 Hrs	–
	Principles of Colorimeter and Spectrophotometer (Demonstration of Beef's law) Estimation of Starch in Food Estimation of crude fiber using Fibre plus	01-04-2022 to 18.04.2022	–	3 Hrs	–
	Paper Chromatography of Amino Acids Estimation of Free Fatty Acid Content of Fish Fat / Oil Estimation of sodium chloride in fishery products(mohr's method)	20-04-2022 to 26.04.2022	–	3 Hrs	
	Estimation of total volatile base N & TMA in fish sample by Conwey Microdiffusionmethod Determination of histamine by fluorometric metho	02-05-2022 to 08.05.2022	–	3 Hrs	–

D. ACTIVITIES

Activities Name	Details
Repetition Class Observation Correction Record Correction Mid Semester Model Practical	02-05-2022 to08.05.2022

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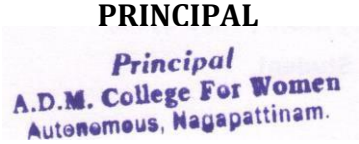

TEACHING PLAN

A. General Information:

Name of the Faculty	:	Ms. V. Santhiya
Department	:	Marine Food Processing and Preservation Technology
Programme	:	III – B. Voc., Marine
Name of the Paper	:	Fisheries Administration and Legislatioon
Programme code	:	VZS
Lecture Hours	:	6 Hrs / Week (Total Hours-90 Hrs)

A. About the Course:

Course Objective	Course Outcomes	Teaching Methodology
• After reading this lesson, you should be able to • To study the research on this field is vital to tap the vast potential of the marine environment to improve human life in any way possible. • .To gain knowledge of Fishery Science with regards to Population Dynamics. • To consider the application of statistical tools to study fishery science. . • To learn about definition and scope of public administration , principles of management of public enterprises. • Understand the meaning of	• After Successful completion of this course work students will able to Fisheries Administration's tasks have shifted from general authority in fisheries to technical support to decentralized institutions, but this is not generally reflected in the actual functioning of the administration. • The fisheries administration and decentralized authorities suffer from financial constraints and a lackof specialized personnel at community level. • Views of fisheries staff on fisheries management differ between the national and the local level.	• Power point E-Modules • Chark and Talk method, • Lecture Method • Discussion Method • Study Assignment Method • Seminar Method

Evaluates the Marine fish landings in India(QTY).	• Continuous reorganization and decentralization processes have reduced transparency and complicated communnication line (both horizontal and vertical) • A multitude of non fisheries institutues increasingly have key roles to play in fisheries management fisheries legislation, with as one result that procedures are becoming long and complicated and the outcomes unsure.	

B. **PLAN OF THE WORK:**

Unit	Topic to be Covered	Proposed date	Lecture Hours	Practical Hours	Remarks
Unit – I Content-15Hrs, Assessment – 3 Hrs Total - 18 Hrs	Public administration Principles of organization Public sector nterprises Current scenario- Public sector enterprises Forms of organization of enterprises Importance of public sector enterprises Producer companies & Trusts. Legal and organizational framework Fisheries administration in India- Work allocation Key State Government Organizations	21-02-2022 to 25.02.2022 28.02.2022to 07.03.2022	4 Hrs 3 Hrs 3 Hrs		-

Unit - II Content-15Hrs, Assessment -3 Hrs Total – 18 Hrs	Fisheries development over five year plans: Sectoral Growth- Marine fisheries: Contributions to state economy- Development of marine fisheries during Five Year Plans- in fisheries sector- An analysis of growth in production and fishing capacity- The 2002 Tenth Five Year Plan and the 2004 India Marine Fishing Policy.	10-03-2022 to 17.03.2022 21.03.2022 to 29.03.2022	3 Hrs 3 Hrs 4 Hrs 4 Hrs	-	
Unit – III Content-15 Hrs, Assessment -3 Hrs Total - 18 Hrs	General background on law: Introduction M.C. Mehta v. Kamal Nath- 'Span Motel Case' Legislations covering IPRs in India- Indian constitution. Marine fisheries legislations: The Indian Fisheries Act, No. 4 of 1897 The Maritime Zones of India (Regulation of fishing by foreign vessels) Rules, 1982.	01-04-2022 to 12.04.2022	3 Hrs 3 Hrs 4 Hrs 4 Hrs	-	-
Unit – IV Content-15 Hrs, Assessment -3 Hrs Total - 18 Hrs	Laws and policies related to the environment: The Environment Protection Act, 1986- The Water (Prevention and Control of Pollution) Act,1974- The Air (Prevention and Control of Pollution) act, 1981National Environment Policy 2006- Protected area Management Integrated coastal and ocean management (ICM) Legislations Related to Protected Area Management.	27-04-2022 to 02.05.2022	4 Hrs 4 Hrs 3 Hrs 3 Hrs	-	-
Unit – V Content-15 Hrs,	Laws relating to fish products and fish marketing:Introduction Some		3 Hrs 4 Hrs	-	-

Assessment – 3 Hrs Total – 18 Hrs	important acts regulating fish products- Trade and other matters Consumer Protection and Regulations.International law of the sea: IntroductionShared fish Stocks-Prohibition of Driftnet Fishing-Sustainable Fishing- European Union Fish Labeling RequirementsShrimp-turtle case-WTO- Code of conduct for responsible fisheries SEZ Law(s) and India's Coastal Areas.	05-05-2022 to 12.05.202	3 Hrs 4 Hrs		

C. ACTIVITIES

Activities Name	Details
Test	Monthly Test- Unit-I (December) Monthly Test - Unit-II (January) CIA / Mid Semester – Unit-I - Unit-III (First 1/2 Unit) - 2 ½ Units (February) 05-05-2022 to12.05.2022 Monthly Test– Unit –IV (March) CIA / Model Examination -Unit-III(Second 1/2 Unit) –Unit-V- 2 ½ Units (April)
Assignment	Assignment I –Unit –I and Unit –II (February) Assignment II –Unit –III and Unit – IV (March)
Quiz	Two Mark Quiz Test - Unit I – Unit – V (April)
Seminar	Unit –V (March & April)
Tutorial Ward Meeting	Monthly once

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