M.SC 5 YEAR INTEGRATED FOOD TECHNOLOGY

DEPARTMENT OF HOME SCIENCE

M.Sc IFT	After successful completion of 5 years integrated programme a student
	should be able to
Programme out comes	PO-1: Food technology Knowledge: Ability to apply principles of food
	science and technology in industry.
	PO-2: Problem analysis : Understand, identify and analysis a problem
	related to food industry and ability to find an appropriate solution for the
	same
	PO-3: Design/ Development of solution: Design, implement and
	evaluate a research based project to meet demand of the society.
	PO-4: Conduct investigations of complex problems: Use research base
	knowledge and methods including design of experiments analysis and
	interpretation of data and provide valid conclusions.
	PO-5: Modern tool usage: Use appropriate techniques skills and modern
	tools in the food industry and in academic profession
	PO-6: Ethics: Understanding of professional, ethical, legal security and
	social issues and responsibilities of the food principle practices in
	industry.
	PO-7: Project Management: Demonstrate Knowledge and
	Understanding of technology and management principals; manage
	projects efficiently in food science and technology and multidisciplinary
	environments after consideration of economic and financial factors.
	PO-8: Individual and Team work: Ability to function effectively as an
	Individual and in a group and in multidisciplinary settings.
	PO-9 The Food technologist and society: Ability to apply knowledge for
	production of safe and asses societal, health and shelf life extension of
	not products relevant to the food preservation and processing
	PO 10: Environment and Sustainability : Understand the impact of the
	ro-10. Environment and Sustainability. Olderstand the impact of the
	demonstrate the knowledge on biodegradation need for sustainable
	development
	PO-11: Communication: Communicate effectively on food product
	development awareness activities related to nutritional importance to
	the community and society an able to understand and write effective
	reports, documentation, make effective presentations and give and
	receive clear instructions.
	PO-12 : Develop Higher Cognitive skills: Apply critical thinking and
	analytical evaluation to contemporary food science information and
	literature.
Programme specific out	PSO-1 Gain the knowledge of food technology through theory and
comes	practicles.
	PSO-2 Understand good laboratory practices and safety.
	PSO-3 Assess the quality of the food and ensure maintenance of ethical
	standards in food production for fostering a healthy generation
	PSO-4 Apply the knowledge, problem – solving and research skills in
	multifaceted careers and health care, food industry, agricultural produce

	and government roles.
	PSO- 5 Formulate innovative solutions utilizing critical research skills
	to address the real-time scenarios combining the appropriate science and
	technology and discover new techniques and tools for improvisation/
	modernization in food processing, food preservation and production.
COURSE OUTCOMES	
Semester-I	
COURSE	OUTCOMES
	After completion of these courses students will be able to
Life Skill	CO-1 Demonstrate basic understanding of computer hardware and
Course- I	software.
Basic	CO-2 Apply skills and concepts for basic use of a computer.
Computer	CO-3 Identify appropriate tool of MS office to prepare basic
Applications	documents, charts, spreadsheets and presentations.
	CO-4 Create personal, academic and business documents using MS
	office.
	CO- 5Create spreadsheets charts and presentations
	CO-6 Analyze data using charts and spread sheets
Skill Development	CO-1 Understand the online business and its advantages and
Course –I	disadvantages
Online Business	CO-2 Recognize new channels of marketing, their scope and steps
	involved
	CO-3 Analyze the procurement, payment process, security and shipping
	in online business
	CO-4 Create new marketing tools for online business
	CO-5 Define search engine, payment gateways and SEO techniques.
English Praxis Course-I	CO-1 Use grammar effectively in writing and speaking.
A Course in	CO-2 Demonstrate the use of good vocabulary
Communication and Soft	CO-3 Demonstrate an understating of writing skills
Skills	CO-4 Acquire ability to use Soft Skills in professional and daily life.
	CO-5 Confidently use the tools of communication skills
	co s confidently use the tools of confident and skins
TELUGU-I	
HSIFT CC-1	CO-1 Utilize knowledge from the physical and biological sciences as a
FUNDAMENTALS OF	basis for understanding the role of food and nutrients in health and
FOOD AND	disease processes
NUTRITION	CO-2 Discuss the digestion and metabolism of the energy nutrients
	(carbohydrates, lipids, protein) and non-energy nutrients
	(vitamins/minerals)
	CO-3 Describe methods used to assess nutrition status. Describe the
	methods used to carry out nutrition research
	CO-4 Determine sound nutritional information from unreliable
	nutritional information
	CO-5 Describe a healthy diet and food choices, and explain why such
	choices will help prevent health problems

HSIFT CC-2 INTRODUCTIONS TO FOOD SCIENCE AND TECHNOLOGY	CO-1To Know theory for history and evolution of food processing CO-2 Define the Plant foods - composition of food, methods of cooking CO-3 Describe the different methods use to assess the quality of eggs, nutritive value and usage of animal food in cookery CO-4 Can gain knowledge on Multipurpose foods, Convenience and Ready to eat foods CO-5 Outline the potential of various nutraceuticals in promoting human health
HSIFT CC-3: FOOD INFORMATICS	CO-1Student shall able to develop thorough knowledge of food research and development centers and industries in India CO-2Student shall able to define Antimicrobial Agents, Antioxidants & Anti Browing Agents, Emulsifier, Stabilizer Chelating Agents, Nutritional Additives along with their properties CO-3Student will analyze the Food laws and regulations in International CO- 4Student will know the importance of Food laws and regulations in India CO-5 Student will recall and gain thorough knowledge of Food Quality, Safety & Testing on different foods (Adulteration)
SEMISTER-II	•
COURSE	OUTCOMES
Life Skill	CO-1Understand the significance of value inputs in a classroom and
Course- II	start applying them in their life and profession
Human Values And Professional Ethics (HVPE)	 CO-2 Distinguish between values and skills, happiness and accumulation of physical facilities, the Self and the Body, Intention and Competence of an individual, etc. CO-3 Understand the value of harmonious relationship based on trust and respect in their life and profession CO-4 Understand the role of a human being in ensuring harmony in society and nature. CO-5 Distinguish between ethical and unethical practices, and start working out the strategy to actualize a harmonious environment wherever they work.
Skill Development	CO-1Identify various types of fruits and vegetables and explain their
Fruits And	nutritive value.
Vegetables	CO-2 Understand the tragile nature of truits and vegetables and causes
Preservation	CO 2 Evaluin various methods of messanuotion for fresh fruits and
	vogetables
	CO-4 Get to know the value-added products made from fruits and vegetables
Skill Development	CO-1 Get basic knowledge onvarious foods and about adulteration.
Courses-III	CO-2 Understand the adulteration of common foods and their adverse
Food Adulteration	impact on health CO-3 Comprehend certain skills of detecting adulteration of common
	CO-4 Be able to extend their knowledge to other kinds of adulteration,

English Praxis Course-II A Course in Reading & Writing Skills	detection and remedies. CO-5 Know the basic laws and procedures regarding food adulteration and consumer protection. CO-1 Use reading skills effectively CO-2 Comprehend different texts CO-3 Interpret different types of texts CO-4 Analyse what is being read
	CO-5 Build up a repository of active vocabulary
	CO-7 Write well for any purpose
	CO-8 Improve writing skills independently for future needs
TELUGU-II	
HSIFT CC-4 FOOD PRODUCT DEVELOPMENT	CO-1To explain the concept of new product development and prepare new products based on special dietary requirements, functionality, convenience and improvisation of existing traditional Indian foods CO-2 To outline basic sensory quality attributes of raw and processed foods CO- 3 Determine the objective and subjective methods of sensory evaluation and their application in industry CO-4 To provide an insight of basic tastes and derived tastes in food. Able to analyze color, flavor, texture and other sensory characteristics of food for quality assurance CO-5 Able to discuss consumer perception and acceptance of food products
HSIFT CC-5 FOOD PROCESSING-I – BREAKFAST AND SNACK TECHNOLOGY	CO-1 Students shall be able to develop preparation of Breakfast Snacks in particular cereal based Snacks Food Items CO- 2 Students shall be able to take part in Basics Kitchen Recipe with scaling up to Commercial Level of all above CO-3 Students shall be able to formulate preparation of Grain based Snacks Food Item CO-4 Students shall be able to plan and prepare Fruits & Vegetables based Snack Item along with introduction of related equipments CO-5 Students shall be able to define Basics of Preparing Extruded Snack Foods Items along with working of equipments related to extrusion of Food Products

HSIFT CC-6 FOOD PACKAGING TECHNOLOGY	CO-1 Comprehend the overview of the scientific and technical aspects of food packaging. Able to assess the different types of packaging materials and their manufacturing processes for different foods CO-2 Classify the Quality testing techniques and barrier properties for different packaging materials CO-3 Able to distinguish about the different forms of packaging system for various food commodities CO-4 Understand the design of packaging machinery , packaging requirement and packaging designing of food CO-5 Identify food packaging laws and regulations. Laws, regulation and the monitoring agencies involved in food safety
	SEMESTER III
COURSE	OUTCOMES
Life Skill Course- III Elementary Statistics	CO-1 To understand the concept of Statistics and its merits and demerits. Distinguishing primary and secondary data. Classification, Tabulation and Pictorial representation of data.
	CO-2 To understand the basic nature of data and how a single value describes the entire data set.Measuring the degree of departure of a distribution from symmetry and reveals the direction of scatterdness of the items.
	CO- 3 To understand the spread of the data and to draw conclusions from the comparison of averages.To understand the concept of correlation and regression and to learn the degree of association between two variables and establishing relationship between the variables.
LIFE SKILL	CO-1 Develop comprehensive understanding of personality
COURSE-IV Personality	CO-2 Know how to assess and enhance one's own personality.
Enhancement &	CO-3 Comprehend leadership qualities and their importance
Leadership	CO-4 Understand how to develop leadership qualities
Skill Development Courses-IV DISASTER MANAGEMENT	CO-1 Understand the nature, cause and effects of disasters CO-2 Comprehend the importance of Disaster Management and the need of awareness CO-3 Acquire knowledge on disaster preparedness, recovery remedial measures and personal precautions CO-4 Volunteer in pre and post disaster management service activities.
English Praxis Course-	CO-1 Speak fluently in English
	CO-2 Participate confidently in any social interaction
Conversational Skills	CO-3 Face any professional discourse CO-4 Demonstrate critical thinking

	CO-5 Enhance conversational skills by observing the professional
	interviews
TELUGU- III	
HSIFT CC-7 FOOD	CO-1 Develop an appreciation about need of different emerging
PROCESSING - II	techniques used in food processing and preservation
	CO-2 Understand and relate the concepts of relate membrane
	technology
	CO-3 Outline the principles and effects of preservation methods on the quality of food
	CO-4 To understand and assess the effects of various preservation
	techniques on the quality and safety of food products
	CO-5 Distinguish the physical and chemical evaluation of thermally
	processed food
HSIFT CC-8 SPICES,	CO-1 To understand the processing techniques of spices and
CONDIMENTS AND	condiments
FLAVOURING	CO- 2 To gain knowledge about the Processing techniques of spices
TECHNOLOGY	CO-3 To gain knowledge about Food flavor and its importance.
	CO- 4To know about the Nature and Synthetic flavor enhancers in
	various foods
	CO-5 To understand the Quality control and Commercial value of
	Spices
HSIFT CC 9:	CO-1 Recall the marketing concept, management and elements
MARKETING OF	CO-2 Develop ideas related to small scale industry with good quality
FOOD PRODUCTS	standards
	CO-3 Compare different types of market to launch their innovative
	products
	CO-4 Summarize the different steps involved in development of food
	products, testing and evaluation
	CO-5 Develop entrepreneurship skills in financial and marketing
	strategies
	SEMISTER-IV
	1
COURSE	OUTCOMES
HSIFT CC 10: FOOD	CO-1 Define organization structures in food service institutions
SERVICE	CO-2 Select appropriate purchasing procedures and issuing
MANAGEMENT	CO-3 Compare the various types of menu and appropriate cover
	CO-4 Compare the theories and principles of management
	CO-5 Demonstrate marketing and sales promotional skills

HSIFT CC 11	CO- 1 Find the different types of the various disasters and their
NUTRITION IN	management
EMERGENCIES AND	CO- 2 Identify vulnerable subpopulations needing special nutritional
DISASTERS	care
	CO- 3 Interpret basic/anthronometric nutritional assessment data
	Describe common micronutrient problems arising from limited diets
	and sources of micronutrients
	$CO_{-}4$ Name the Public nutrition approach to tackle nutritional problems
	in emergencies
	CO 5 Design and Planning of Nutritional Enidemiological studies
HSIET CC 12 NOVEL	CO 1 Define and learn the principles of different Nevel techniques
FOOD TECHNOLOCY	CO-1 Define and reasonation of food
FOOD TECHNOLOGY	CO 2 Unstante the select masservation methods emprepriete for energific
	CO- 2 mustrate the select preservation methods appropriate for specific
	1000s
	CO-5 Find the effects of preservation methods on the quanty of foods
	CO 4 Assume basis information shout none materials for manufacturing
	CO-4 Assume basic information about nano materials for manufacturing
	nano particles
	CO-5 Adopt nanotechnology techniques for food industries
HSIFT CC13: POST	CO-1 Tell the importance & scope of post-harvest management of fruits
HARVEST	and vegetables in Indian economy
MANAGEMENT OF	CO-2 Explain the maturity indices of fruits and vegetables
FRUITS AND	CO-3 Explain the concept of quality in relation to fruit and vegetable
VEGETABLES	based products
	CO -4 Illustrate the processing and preservation of fruits and vegetables
	using various techniques
	CO-5 Improve the Post Harvest handling system and packaging of
	fruits and vegetables
HSIFT CC 14:	CO-1 Explain the positive role and benefits of microorganisms and
ENZYMES IN FOOD	enzymes in food production processing and preservation
PROCESSING	CO_{-2} Interpret the new development in the field with analytical thinking
	of the various aspects of the new technology
	CO-3 Develop newer enzymes for improving the overall nutrition and
	process ability of a product
	CO-4 Analyze the major classes of enzymes and the factors affecting
	enzyme activity
	CO_{-5} Define the various enzyme inhibitions and summarize extraction
	CO-5 Define the various enzyme minoritons and summarize extraction
	of enzymes

HSIFT CC 15: CEREAL AND LEGUME TECHNOLOGY	 CO-1 How to use the technology for Wheat Milling and Wheat based Food Products CO- 2 Illustrate about the cereals structure and nutrient composition CO-3 Make use of equipments related to Wheat & Rice Milling along with equipments related to Wheat based & Rice based Food Products CO-4 Illustrate the Milling of Corn & Corn based other Food Products along with equipments CO- 5 Discuss the physical, chemical and functional properties of various proteins in legumes
	SEMISTER – V
COURSE	OUTCOMES
HSIFT SEC 1: BAKING & CONFECTIONARY TECHNOLOGY	CO-1 Apply the knowledge of the technologies behind bakery products. Understand the status of confectionary industry in India CO-2 Interpret the fundamentals of baking and technology behind various bakery products and breakfast cereals CO-3 Tell about the trends in bakery industry CO- 4 Importance of technology used in modified bakery products for different health conditions. Understand the technologies (equipment and process) for confectionary product preparations CO- 5 Adopt the standards & regulations, quality parameters for sugar
	chocolates and other confectionery products
HSIFT SEC 2: FOOD PRESERVATION TECHNOLOGY	CO-1 To impart knowledge and find the causes of food spoilage CO- 2 To learn principles and illustrate the different techniques used in processing and preservation of foods CO-3 Apply their knowledge on high pressure processing, pulsed electric processing, irradiation and hurdle technology in various food industries CO-4 Distinguish the effect of various preservation techniques on the quality and safety of food products CO-5 To identify and select preservation methods appropriate for specific foods. To design and evaluate a processing procedure used to preserve a food product
HSIFT SEC 3: DAIRY TECHNOLOGY	 CO- 1 How to do sampling of milk and milk products CO-2 Formulate the milk and milk products. CO-3 Explain the composition of milk CO-4 Experiment the organization and operations involved in milk processing unit CO-5 Take part in legislation for the quality control of milk and milk products

HSIFT SEC 4: FOOD	CO-1 Define the importance of microbiological quality control
MICROBIOLOGY	programmes are necessary in food production. Acquire knowledge on
SAFETY AND	different properties and microbiology
OUALITY CONTROL	CO_{-2} Ability to identify the characteristics of important pathogens and
QUALITICONTROL	co-2 Ability to identify the characteristics of important pathogens and
	Sponage microorganisms in roods
	CO-5 Determine the role and significance of intrinsic and extrinsic
	factors on growth of microorganisms in foods and differentiate which
	organisms would be likely to grow in a specific food product
	CO-4 Identify the conditions under which the important pathogens and
	spoilage microorganisms
	CO- 5 Discuss the role of microorganisms in Food hygiene and
	sanitation in the food processing industries
HSIFT SEC 5: FOOD	CO-1 Define the principles of drying techniques used in processing and
DEHYDRATION	preservation of foods
TECHNOLOGY	CO-2 Explain the quality characteristics of foods preserved by
	drying/dehydration\freezing
	CO-3 Choose check on the working of different tools and machineries
	used for drying/dehydration of fruits and vegetables
	CO-4 Take part in the knowledge of different drying methods of fruits
	and vegetable processing
	CO- 5 Inspect, pack and store dried/dehydrated fruits and vegetables
HSIFT SEC 6: External	CO-1 Define the beneficial effects of nutraceuticals on foods with
Elective	regards to nutritional and functional properties
EE 1:	CO-2 After the course the students are expected to assess new
NUTRACEUTICALS	development in the field with analytical thinking of the various aspects
AND FUNCTIONAL	of the new technology
FOOD TECHNOLOGY	CO-3 Outline the types and potential of various nutraceuticals and
	functional foods in promoting human health
	CO-4 Know theory for nutraceutical compounds, their sources and role
	in promoting human health
	CO-5 Identify the safety issues and consumer acceptance ,labeling,
	marketing and regulatory issues related to nutraceutical and functional
	food
HSIFT SEC 6: External	CO-1 Define the over view of the methods of assessment of Nutritional
Elective	and health status
EE 2: NUTRITIONAL	CO-2 After the course the students are expected to know the Direct and
ASSESSEMENT	Indirect methods of Nutritional assessment of human groups
	CO-3 Outline Dietary assessment: Methods and techniques for assessing
	dietary intakes of individual
	CO-4 Know theory for Clinical assessment: Study of different methods
	and techniques for clinical assessment of nutritional status
	CO-5 Identify the Biochemical assessment: Methods and techniques for
	major nutritional disorders

SEMISTER-VI		
COURSE OUTCOMES		
HSIFT SEC 7: FOOD	CO-1 Find the quality control and assurance system in food industry.	
QUALITY	CO-2 Explain the risk assessments procedure for food sector.	
ASSURANCE	CO-3 Assess the GMPs and GHP regulations in the food sector.	
	CO-4 Make use of different food safety management used worldwide.	
	CO- 5 Test the sensory evaluation methodology used in food industry	
HSIFT SEC 8:	CO-1 Define the different uses of food biotechnology. These include the	
FERMENTATION	tools used, production of recombinant proteins and additives to use in	
TECHNOLOGY	food technology, transgenic foods, diagnostic system used in food	
	industry, and ethics and safety of food biotechnology	
	CO-2 Determine and evaluate the operational considerations and relative	
	advantages relating to the choice of techniques used in downstream	
	processing of food products	
	CO-3 Illustrate the basic biological and chemical processes of living	
	cells, enzymes, and microbial nutrition in relation to fermentation	
	CO 4 Understand principles and make up of ineculum /starter culture	
	development for industrial fermentations and fermenter /reactor design	
	control and operation	
	CO-5 Understand and able to find the origin, scope and development of	
	fermented foods and also different savoury and snack foods	
HSIFT SEC 9: FOOD	CO-1 Demonstrate various aspects regarding safety, quality and	
TOXICOLOGY	toxicology of foods and food products	
	CO-2 Tell about the intentional and non -intentional of food	
	contaminants in the food chain	
	CO-3 Find the toxicants generated in food Processing and Packaging	
	CO-4 Take part in the chemical, technological and toxicological aspects	
	of food additives	
	CO- 5 Explain the effect of microbial toxins in food born infections and	
	anseases	
SEMISTER-VII		
COURSE	OUTCOMES	
HSIFT 703:	CO-1 Tell the concept of a systematic literature review and report	
RESEARCH	writing	
METHODOLOGY	CO-2 Explain the correlation, regression analysis, regression	
AND STATISTICS	diagnostics, partial and Multiple correlations.	
	CO-3 Apply knowledge on scientific writing method and styles	
	CO-4 To Develop a research design on a topic relevant to their field	
	CO- 5 Formulating and tackling Statistics related problems and	
	identifying and applying appropriate principles.	
	CO-6 Take part into solve a wide range of problems associated with	
	Statistics	
SEMISTER-VIII		

COURSE	OUTCOMES
HSIFT 801:	CO-1To develop an insight of Entrepreneurs and Entrepreneurship
ENTREPRENEURSHIP	development
DEVELOPMENT	CO-2 To Develop leadership among women entrepreneurs and
	Networking amongst entrepreneurs
	CO-3 Find knowledge and acquired skills for setting up an enterprise
	and its management
	CO- 4 Assume the basics of Business project report and SWOT analysis
	CO-5 Discover different types of fund raising and to understand the
	different support system for business development
SEMISTER-IX	
COURSE	OUTCOMES
COMMUNICATIVE	CO-1 Relate learner to communicate effectively and appropriately in
ENGLISH	real life situation
	CO-2 Constructive skills on English effectively for study purpose across
	the curriculum
	CO-3 Create interest in and appreciation of Literature
	CO-4Justify to integrate the use of the four language skills i.e. Reading, Listening, Speaking
	CO-5 Examine the behavior, skill, or action that a student can
	demonstrate for the effective communication
HSIFT 901:	CO-1 Knowledge on Understands the metabolism of different macro
NUTRITIONAL	and micro nutrients in human physiology. Build knowledge on factors
BIOCHEMISTRY	affecting digestion, absorption of nutrients
	CO-2 Explain the metabolism of CHO and Qualitative analysis
	CO-3 Define the properties of amino acids and metabolism of Proteins
	and Qualitative analysis
	CO-4 To analyze the classification, metabolism and synthesis of Lipids
	and Qualitative analysis. Ability to integrate chemistry and biochemistry
	principles into real-world food science and nutritional problems
	CO-5 Develop the Knowledge on enzymes and its role in nutrient
	metabolism

HSIFT 902: FOOD	CO-1 Students will able to outline the chemistry, properties and effects
CHEMISTRY	of processing on food components
	CO-2 Define food components reactions and their impact on sensory,
	nutritional, and functional properties of foods
	CO-3 Ability to identify the structure of food constituents and relate the
	structure to the constituents function and importance in foods with
	respect to food quality, nutrition, safety, processing, etc.
	CO- 4 Ability to explain influence of factors such as temperature, pH,
	10nic characteristic and strength, bonding, etc. on chemical changes in
	rood systems and judge now to adjust these conditions to improve or minimize chemical and biochemical deterioration of food systems
	$C_{0.5}$ Ability to know the theme of molecular rationalization for the
	observed physical properties and reactivity of major food components.
	source physical properties and reactivity of major rood components.
	CO 1 Franking the animalian of Unit an anglish
HSIFT 903 UNIT	CO-1 Explain the principle of Unit operation
MANAGEMENT FOR	equipment's
FOOD TECHNOLOGY	CO-3 Relate basic knowledge of hygiene and sanitation principles and
	practices in food industry
	CO -4 Understand the function and principles of cold chain management
	and design of cold stores and warehouses.
	CO-5 Discuss the basic principles of refrigeration, freezing, fluid flow,
	heat and mass transfer, steam, Psychometricetc. from food industrial
	point
HSIFT 904	CO-1Relate the science and technology for processing different types of
TECHNOLOGY OF	beverages.
BEVERAGES	CO-2 Explain processing of fruit juice beverages, carbonated beverages,
	citrus beverages, tea and coffee.
	CO_{-3} Find about the permitted additives in beverages.
	CO-5 Development of value added beverages and recent trends in
	beverage industry
	beveruge mausity.
	SEMISTER-X
COUDGE	
COURSE	OUTCOMES CO 1 Find the Commuting concents and their applications using the
FOUNDATION COURSE IN	coursed based knowledge
COMPUTER	CO-2 How to use limits to compute the derivative of a function
APPLICATIONS	CO-3 Discuss the evolution of computers in different generations.
	CO-4 Classify computers in different categories based on their
	capabilities.
	CO-5 Assume to utilize methods of integration
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HSIFT 1001 FOOD ENGINEERING	 CO-1 Illustrate the Basics of Mass & Energy Conservation as applied to Food Processing Operations CO-2 Students able to recall Basics of Fundamentals of Food Processing Operations. CO-3 Explain the working of equipments in Food Industry related to transport of Fluids, Thermal Processing and Material Handling along with basics as applied to Food Processing Operations. CO-4 Explain the Basics of Psychometrics & Air Conditioning Processes related to Food Processing Operations. CO-5 Measure of Mathematical Calculations related to above Engineering Applications as applied to Food Processing Operations.
HSIFT 1002 FOOD ANALYSIS HSIFT 1003 TECHNOLOGY OF FATS AND OIL SEEDS	 CO-1 Define about the applications of various analytical and instrumental techniques. CO-2 Explain the mechanisms and principle behind various analytical techniques. CO-3 Illustrate the principle and mechanism of analytical instruments. To describe bio-chemical analysis of food components CO-4 Improve the spectroscopic techniques CO-5 Take part in grasp technical exposure in chromatographic techniques, Comprehend the field of electrophoresis CO-1 Explain about various edible, non-edible, commercial oils and fats from Animal and vegetable sources including various waxes CO-2 Identify the various fatty acids present in oils & fats, composition of fatty acids and glyceride & non-glyceride components. CO-4 Apply their understanding of Chemistry of Oils & Fats to determine the adulteration of Oils & Fats and their industrial applications. CO-5 Demonstrate the degumming, neutralization, dewaxing methods in laboratory to test the hypothetical knowledge.
HSIFT 1004 FISH & MEAT PROCESSING TECHNOLOGY	 CO-1 Find about the significance and necessity of organized animal product sector. CO-2 Summarize knowledge of status and scope of Meat, Egg, & Poultry industry world wide CO-3 Students shall develop the ability of value- addition to Meat, Poultry, Egg and Fish. CO-4 Take part in manufacturing practices of egg based, fish based and meat based by products and their processing techniques. CO-5 Students shall improve the different processing, preservation and quality control of Meat, Egg and Fish in Food Industry

HSIFT 1005	CO-1 Define the nutrition and dietetics to the stages of human
THERAPEUTIC FOOD	development
TECHNOLOGY	CO-2 The student will be able to apply the principles of nutrition and
	dietetics to diseased as well as normal conditions
	CO-3 To make students competent in planning diets for different
	diseases and physiological conditions
	CO-4 Formulate balanced diets for various normal and therapeutic
	conditions
	CO-5 Develop special feeds for normal and therapeutic conditions

M. Sc 5 years Integrated Food Technology PROGRAM OUTCOMES (PO) – COURSE OUTCOMES (CO) MAPPING YEAR - I SEMESTER – I (H- High; M- Medium; L - Low)

Life Skill	СО	PO	PO1	PO1	PO1								
Course- I		1	2	3	4	5	6	7	8	9	0	1	2
Basic	CO1	Μ	Η	Η	Η	Η	Μ	Н	Η	Μ	Μ	Η	Н
Computer	CO2	Μ	Μ	H	Η	Η	Μ	Η	Η	Η	Μ	Η	Н
Applications	CO3	Μ	Η	H	Η	Μ	Μ	Η	Η	Μ	Μ	Μ	Н
	CO4	Η	Μ	H	Η	Η	Μ	Η	Η	Μ	Μ	Η	Н
	CO5	Μ	Μ	H	Μ	Μ	Μ	Μ	Η	Η	Μ	Н	Н
	CO6	Μ	Н	H	Μ	Μ	Μ	Μ	Н	Η	Μ	Μ	Н

Skill Development	СО	PO	PO1	PO1	PO1								
Course –I		1	2	3	4	5	6	7	8	9	0	1	2
Online Business	CO1	Μ	Н	Μ	Μ	Н	Η	Η	Η	Η	Μ	Μ	Μ
	CO2	Н	Η	Η	Μ	Μ	Μ	Н	Η	Н	Μ	Μ	Μ
	CO3	Μ	Η	Μ	Μ	Μ	Μ	Н	Η	Н	Μ	Μ	Н
	CO4	Μ	Н	H	Н	Н	Η	Η	Η	Η	Μ	Η	Μ
	CO5	Μ	Η	H	Η	Η	Μ	Η	Η	Μ	Μ	Н	Μ

English Praxis Course-I	СО	PO	PO1	PO1	PO1								
A Course in		1	2	3	4	5	6	7	8	9	0	1	2
Communication and Soft	CO1	L	L	L	L	Μ	L	L	Η	L	L	Н	L
Skills	CO2	L	L	L	L	Μ	L	Μ	Η	L	L	Н	L
	CO3	L	L	Μ	L	Μ	L	Μ	Η	L	L	Н	L
	CO4	L	L	L	L	Μ	L	Μ	Η	L	L	Н	L
	CO5	L	L	L	L	Μ	L	Μ	Η	L	L	Н	L

TELUGU-I	СО	PO	PO1	PO1	PO1								
		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Μ	Η	L	Μ	Η	L	Μ	Μ	L	L	Μ	Μ
	CO2	Η	Μ	Μ	L	L	L	L	Μ	Μ	Μ	L	L
	CO3	L	Μ	L	Μ	Μ	Μ	Μ	L	Μ	Μ	Μ	L
	CO4	L	Μ	L	Μ	Μ	Μ	Μ	Μ	L	Μ	L	L
	CO5	Μ	L	Μ	Μ	L	Μ	L	L	Μ	Μ	L	Μ

HSIFT CC-1	СО	PO	PO1	PO1	PO1								
FUNDAMENTALS OF		1	2	3	4	5	6	7	8	9	0	1	2
FOOD AND	CO1	Н	Η	Μ	Н	Μ	Μ	Н	L	Η	H	Н	Μ

NUTRITION	CO2	L	Η	Μ	L	Μ	Μ	L	Μ	Η	H	Η	Μ
	CO3	Μ	Μ	Η	Η	Μ	Μ	L	Н	Η	L	Н	Η
	CO4	Η	Μ	Η	Н	L	L	Μ	Μ	Η	L	Н	Μ
	CO5	Η	Μ	Η	Μ	Μ	Μ	Μ	Μ	Η	Η	Н	Н

HSIFT CC-2	СО	PO	PO1	PO1	PO1								
INTRODUCTIONS TO		1	2	3	4	5	6	7	8	9	0	1	2
FOOD SCIENCE AND	CO1	Η	Н	Μ	Μ	Η	H	L	Μ	Η	Μ	H	Н
TECHNOLOGY	CO2	Η	Н	Η	Н	Η	Μ	Н	Н	Η	Η	Μ	Μ
	CO3	Η	Μ	Η	Μ	Η	Μ	H	Η	Η	H	H	L
	CO4	Μ	L	Μ	Н	Η	Μ	H	Μ	Н	Μ	H	Μ
	CO5	Μ	Μ	Н	Μ	Н	Η	Η	Μ	H	L	H	L

HSIFT CC-3: FOOD	СО	PO	PO1	PO1	PO1								
INFORMATICS		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	H	Μ	Μ	Μ	Μ	H	Η	L	Η	Μ	Η	Μ
	CO2	Μ	Η	Н	Μ	Η	Μ	Μ	Μ	Η	Μ	Η	H
	CO3	H	Н	Μ	Μ	L	Н	Μ	Μ	Н	H	Н	H
	CO4	H	Η	Μ	Μ	L	H	Μ	Μ	Η	H	Н	H
	CO5	H	Η	Η	Η	Η	H	Η	Η	Η	H	Η	H

Semester - II

Life Skill	СО	PO	PO1	PO1	PO1								
Course- II		1	2	3	4	5	6	7	8	9	0	1	2
Human Values	CO1	Μ	Η	Μ	Н	Η	Η	Η	Η	Μ	Μ	Μ	Н
And	CO2	Μ	Η	Η	Н	Η	Μ	Η	Η	Μ	Μ	Μ	Μ
Professional	CO3	Μ	Η	Μ	Μ	L	Η	Μ	Η	Η	Μ	Μ	Μ
Ethics (HVPE)	CO4	Μ	Μ	Η	Μ	L	Η	Μ	Η	L	L	Η	Μ
	CO5	Η	Η	Μ	Μ	Μ	Η	Μ	Η	Η	Μ	Н	Μ

Skill Development	СО	PO	PO1	PO1	PO1								
Courses-II		1	2	3	4	5	6	7	8	9	0	1	2
Fruits And	CO1	Μ	Н	Μ	Μ	Μ	L	L	L	Μ	Μ	Μ	Μ
Vegetables	CO2	Н	Н	Μ	Μ	Μ	L	Μ	Μ	Μ	Μ	Μ	Μ
Preservation	CO3	Н	Μ	Μ	Μ	Η	L	Μ	L	Μ	Μ	Μ	Μ
	CO4	Н	Н	Μ	L	Μ	L	Μ	Μ	Η	Μ	Μ	L

Skill Development	СО	PO	PO1	PO1	PO1								
Courses-III		1	2	3	4	5	6	7	8	9	0	1	2
Food Adulteration	CO1	Η	L	Μ	Μ	Μ	Н	L	L	Μ	L	Μ	L
	CO2	Μ	Η	Μ	Μ	Η	Η	L	Η	L	Η	Н	Μ
	CO3	Η	Μ	Μ	Η	Η	Η	L	Μ	Μ	Μ	Μ	L
	CO4	Μ	Н	Η	Η	Η	Η	Μ	Μ	Η	Μ	Н	L
	CO5	Μ	Μ	Η	Η	Η	Η	Η	Μ	Η	Η	Η	Н

English Praxis Course-II	СО	PO	PO1	PO1	PO1								
A Course in Reading &		1	2	3	4	5	6	7	8	9	0	1	2
Writing Skills	CO1	L	L	L	L	L	L	Н	Η	L	L	Н	Μ
	CO2	L	Μ	L	L	Μ	L	Μ	Η	L	L	Η	Μ
	CO3	L	Μ	L	L	Μ	L	Μ	Η	L	L	Η	Μ
	CO4	L	Μ	L	Μ	Μ	L	Μ	Η	L	L	Η	Μ
	CO5	L	Μ	L	L	Μ	L	Μ	Η	L	L	Η	Μ
	CO6	L	L	L	L	Μ	L	Μ	Η	L	L	Η	Μ
	CO7	L	L	L	L	Μ	L	Μ	Η	L	L	Η	Μ
	CO8	L	L	L	L	Μ	L	Μ	Η	L	L	Η	Μ

TELUGU-II	СО	PO	PO1	PO1	PO1								
		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Μ	Μ	L	Μ	Μ	L	Μ	Μ	Н	H	L	L
	CO2	Μ	Η	Μ	Μ	Μ	Н	L	L	Μ	Μ	Μ	Μ
	CO3	Μ	Η	Μ	Μ	Η	L	Н	Η	L	L	Μ	Μ
	CO4	L	Μ	L	L	Μ	Μ	Μ	Η	L	L	Μ	L
	CO5	L	Μ	L	Μ	Η	Μ	Μ	Η	Μ	Μ	L	Μ

HSIFT CC-4 FOOD	СО	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
PRODUCT		1	2	3	4	5	6	7	8	9	0	1	2
DEVELOPMENT	CO1	Η	Н	Н	Н	Μ	Н	Н	Н	Н	Μ	Η	L
	CO2	H	Μ	Μ	Η	Η	Η	Η	Η	Μ	Μ	Μ	Μ
	CO3	H	Μ	Η	Μ	Η	Μ	Μ	Η	Η	Μ	Н	Μ
	CO4	H	H	Η	Η	Η	Μ	Μ	Μ	Η	Η	Η	Η
	CO5	H	Μ	Μ	Η	Η	Μ	Η	Η	Μ	Μ	Η	Μ
	a 1 a								-				
HSIFT CC-5 FOOD	CO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
HSIFT CC-5 FOOD PROCESSING-I –	СО	PO 1	PO 2	PO 3	PO 4	PO 5	PO 6	PO 7	PO 8	PO 9	PO1 0	PO1 1	PO1 2
HSIFT CC-5 FOOD PROCESSING-I – BREAKFAST AND	CO CO1	PO 1 H	PO 2 L	PO 3 L	PO 4 L	PO 5 L	PO 6 L	PO 7 L	PO 8 L	PO 9 H	PO1 0 L	PO1 1 L	PO1 2 L
HSIFT CC-5 FOOD PROCESSING-I – BREAKFAST AND SNACK TECHNOLOGY	CO CO1 CO2	PO 1 H L	PO 2 L L	PO 3 L L	PO 4 L L	PO 5 L L	PO 6 L L	PO 7 L L	PO 8 L H	PO 9 H L	PO1 0 L L	PO1 1 L L	PO1 2 L L
HSIFT CC-5 FOOD PROCESSING-I – BREAKFAST AND SNACK TECHNOLOGY	CO CO1 CO2 CO3	PO 1 H L L	PO 2 L L L	PO 3 L L M	PO 4 L L L	PO 5 L M	PO 6 L L M M	PO 7 L L L	PO 8 L H H	PO 9 H L L	PO1 0 L L L	PO1 1 L L L	PO1 2 L M
HSIFT CC-5 FOOD PROCESSING-I – BREAKFAST AND SNACK TECHNOLOGY	CO CO1 CO2 CO3 CO4	PO 1 H L L H	PO 2 L L L L	PO 3 L L M M	PO 4 L L L L	PO 5 L L M M	PO 6 L L M L	PO 7 L L L L	PO 8 L H H H	PO 9 H L L H	PO1 0 L L L L	PO1 1 L L L L	PO1 2 L M L

HSIFT CC-6 FOOD	СО	PO	PO1	PO1	PO1								
PACKAGING		1	2	3	4	5	6	7	8	9	0	1	2
TECHNOLOGY	CO1	Η	Η	L	Μ	Μ	H	L	L	L	Η	L	Μ
	CO2	Η	L	L	L	Μ	L	Η	L	L	Η	L	L
	CO3	Η	L	L	Μ	L	L	Η	L	Η	Η	H	Μ
	CO4	Η	Μ	L	L	Η	L	L	L	L	Η	H	L
	CO5	Η	L	L	L	L	Η	Μ	L	Η	Μ	L	L

Semester - III

Life Skill Course-	CO	PO	PO1	PO1	PO1								
III		1	2	3	4	5	6	7	8	9	0	1	2
Elementary	CO1	Μ	Η	Η	Η	Η	L	Μ	Η	Μ	L	Μ	Η

Statistics	CO2	Μ	H	Μ	Η	Η	L	Μ	Η	Μ	L	Μ	Μ
	CO3	Μ	Н	Н	Μ	Μ	L	Μ	Н	Μ	Μ	Μ	Н
LIFE SKILL	СО	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
COURSE-IV		1	2	3	4	5	6	7	8	9	0	1	2
Personality	CO1	Μ	Η	Μ	Μ	Μ	Μ	Μ	Η	Μ	L	Η	Η
Enhancement &	CO2	Μ	Η	Μ	Μ	Μ	Η	Μ	Η	Η	L	Н	Η
Leadership	CO3	L	Μ	Μ	Μ	Μ	Μ	Μ	Η	Μ	L	Μ	Н
	CO4	Μ	Н	Μ	L	L	Μ	Μ	Н	Μ	L	Н	Н
Skill Development	CO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
Skill Development	CO	PO	PO	PO	PO	PO	PO	PO	PO	PO	POI	POI	POI
Courses-IV	001		<u> </u>	3	4	5	0	/	8	9			
DISASTER	COI	L	L	H	H	H	н	H	H	M	H	H	M
MANAGEMENT	CO2	L	L	H	H	H	H	Μ	H	Μ	H	H	M
	CO3	L	H	Η	Η	Η	H	Η	Η	Η	Μ	H	H
	CO4	L	L	Н	Н	Η	Η	Η	Н	Н	Η	Н	Η
		_	_	-		_		_	-	-	_	-	_
English Praxis Course-III	CO	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
A Course in		1	2	3	4	5	6	7	8	9	0	1	2
Conversational Skills	CO1	L	L	L	L	Μ	L	Μ	H	L	L	Η	Μ
	CO2	L	L	Μ	L	Μ	L	Μ	Η	L	Μ	Μ	Μ
	CO3	L	Μ	Μ	L	Μ	L	Μ	Μ	L	L	Μ	Μ
	CO4	L	L	Μ	L	Μ	L	Μ	Н	L	Μ	Н	Μ

CO5

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Telugu III	CO	PO	PO1	PO1	PO1								
_		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	L	Μ	Μ	Μ	H	Μ	Η	Μ	Н	L	Μ	Μ
	CO2	H	Μ	Μ	L	H	Μ	Μ	Μ	L	Μ	Η	Μ
	CO3	Н	L	Μ	L	Μ	L	Μ	Н	L	Μ	Η	Μ
	CO4	H	L	L	Μ	Μ	L	Μ	Η	L	Μ	Η	Μ
	CO5	Μ	L	Μ	Μ	L	Μ	Μ	Μ	L	L	Μ	Μ

HSIFT CC-7 FOOD	СО	PO	PO1	PO1	PO1								
PROCESSING - II		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Η	L	Η	L	Η	Μ	L	Η	Η	L	L	L
	CO2	Η	L	L	L	L	Η	L	L	Η	L	Μ	Н
	CO3	Η	L	L	L	L	Η	L	L	Η	L	L	L
	CO4	Η	L	L	L	L	L	L	L	Η	L	L	L
	CO5	Η	L	Н	L	Η	Μ	L	L	Η	L	L	L

HSIFT CC-8 SPICES,	СО	PO	PO1	PO1	PO1								
CONDIMENTS AND		1	2	3	4	5	6	7	8	9	0	1	2
FLAVOURING	CO1	Η	Н	Μ	Н	Μ	Μ	Μ	H	Μ	Μ	Н	L
TECHNOLOGY	CO2	Η	Н	Μ	Н	Μ	Н	Н	H	Η	Η	Μ	L
	CO3	Η	Μ	Н	Н	Η	Μ	Μ	H	Η	Μ	Н	L
	CO4	Η	Η	Μ	Η	Н	H	Η	H	Μ	Μ	Η	Μ
	CO5	Η	Η	Μ	Η	Μ	Μ	Μ	Η	Н	Η	Η	Η

HSIFT CC 9:	СО	PO	PO1	PO1	PO1								
MARKETING OF FOOD		1	2	3	4	5	6	7	8	9	0	1	2
PRODUCTS	CO1	Μ	Н	Μ	Η	Η	H	Μ	Η	Η	Η	H	Μ
	CO2	H	Η	Н	Н	Η	Μ	Μ	Н	Н	Μ	Μ	Μ
	CO3	Μ	Μ	Η	Η	Η	Μ	Η	Η	Η	Η	H	Μ
	CO4	H	Н	Μ	Μ	Η	Μ	Η	Η	Η	Μ	H	Μ
	CO5	H	Μ	Μ	Η	Η	H	Η	Η	Η	Μ	H	H

SEMISTER-IV

HSIFT CC 10: FOOD	СО	PO	PO1	PO1	PO1								
SERVICE		1	2	3	4	5	6	7	8	9	0	1	2
MANAGEMENT	CO1	Μ	L	L	Μ	Η	Н	Н	Μ	Μ	Η	Η	Μ
	CO2	Μ	Μ	Μ	Μ	Η	Н	Н	Μ	Н	Η	Η	Μ
	CO3	Η	Μ	Η	Η	Η	H	Μ	Η	Η	Η	Η	Μ
	CO4	Μ	Н	Η	Н	Μ	Η	Н	Μ	Μ	Η	Η	Μ
	CO5	L	L	L	Μ	Μ	H	Μ	Μ	Μ	Μ	Η	L

HSIFT CC 11	СО	PO	PO1	PO1	PO1								
NUTRITION IN		1	2	3	4	5	6	7	8	9	0	1	2
EMERGENCIES AND	CO1	L	Μ	Μ	Μ	Η	H	Μ	Μ	Μ	Η	Η	L
DISASTERS	CO2	Η	Н	Η	Η	Н	Μ	Μ	Η	Н	Η	Η	Μ
	CO3	Η	Η	Η	Η	Η	H	H	Η	Η	Μ	Η	Μ
	CO4	Η	Η	Η	Η	Η	Μ	H	Η	Η	Η	Η	Μ
	CO5	L	Η	Η	Η	Μ	Μ	H	Η	Η	Η	Η	Μ

HSIFT CC 12 NOVEL	СО	PO	PO1	PO1	PO1								
FOOD TECHNOLOGY		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Η	Μ	H	Μ	L	H	Μ	Μ	H	H	H	Μ
	CO2	Η	Μ	H	Η	L	Μ	H	Η	H	H	H	Μ
	CO3	L	Μ	Н	Н	Μ	Н	Н	Н	H	Μ	H	L
	CO4	L	L	H	Η	Μ	H	H	Η	H	H	H	Μ
	CO5	Μ	L	Μ	Μ	Μ	H	H	Η	H	H	H	Μ

HSIFT CC13: POST	СО	PO	PO1	PO1	PO1								
HARVEST		1	2	3	4	5	6	7	8	9	0	1	2
MANAGEMENT OF	CO1	Η	Μ	Μ	Μ	Н	Μ	Μ	Η	Н	Μ	H	Μ
FRUITS AND	CO2	Н	Н	Η	Η	Η	Μ	Н	Η	Μ	Μ	Η	Μ
VEGETABLES	CO3	Н	Н	Η	Η	Η	Η	Н	Η	Н	H	Η	Μ
	CO4	Η	Η	Η	Η	Η	Μ	Η	Η	Μ	H	H	Μ
	CO5	Η	Μ	Η	Н	Η	Η	Н	Η	Η	H	H	Μ

HSIFT CC 14:	СО	PO	PO1	PO1	PO1								
ENZYMES IN FOOD		1	2	3	4	5	6	7	8	9	0	1	2
PROCESSING	CO1	Η	Н	Η	Н	Н	Μ	Η	Η	Η	Μ	Н	Μ
	CO2	Н	Η	Н	Н	Η	Μ	Н	Η	Η	Μ	Μ	Μ
	CO3	Η	Η	Η	Η	Η	Μ	Μ	Η	Μ	Η	Η	Μ
	CO4	Η	Η	Η	Η	Η	Μ	Η	Η	Η	Η	Н	Μ
	CO5	Н	Н	Н	Н	Μ	Μ	Η	Η	Η	Н	Н	Μ

HSIFT CC 15: CEREAL	СО	PO	PO1	PO1	PO1								
AND LEGUME		1	2	3	4	5	6	7	8	9	0	1	2
TECHNOLOGY	CO1	Η	Н	Μ	Μ	Н	L	Η	Η	Н	L	Μ	Μ
	CO2	Η	Η	Μ	Н	Н	Μ	Η	Η	Н	Μ	Μ	Μ
	CO3	Η	Η	Н	Н	Н	Μ	Н	Η	Μ	Н	Н	Μ
	CO4	Η	Μ	Н	Μ	Н	Μ	Η	Η	Μ	Η	Н	Μ
	CO5	Η	Μ	Μ	Μ	Η	Μ	Н	Η	Η	H	Н	L

SEMISTER - V

HSIFT SEC 1: BAKING &	СО	PO	PO	PO	PO	PO	PO	РО	PO	PO	PO1	PO1	PO1
CONFECTIONARY		1	2	3	4	5	6	7	8	9	0	1	2
TECHNOLOGY	CO1	Η	Н	Μ	Μ	Н	Μ	Μ	Μ	H	L	Μ	Μ
	CO2	Η	Н	L	Μ	Μ	Μ	Н	Μ	Η	L	Н	Μ
	CO3	Μ	Н	Μ	Μ	L	Μ	Μ	Н	Μ	Μ	Н	Н
	CO4	Μ	Н	Μ	Н	Н	Μ	Μ	Μ	H	Μ	Н	Μ
	CO5	Μ	Μ	Η	Μ	Η	H	Η	Η	H	Н	H	H

HSIFT SEC 2: FOOD	СО	PO	PO1	PO1	PO1								
PRESERVATION		1	2	3	4	5	6	7	8	9	0	1	2
TECHNOLOGY	CO1	Η	Μ	L	L	L	Μ	L	Н	Н	L	L	L
	CO2	Η	L	Μ	L	Η	Η	L	L	Η	L	L	Н
	CO3	Η	L	L	L	L	Η	L	L	Η	L	L	Н
	CO4	Η	L	L	L	L	L	L	L	Η	L	Μ	L
	CO5	Н	L	Η	L	Η	Μ	L	Η	Η	L	L	L

HSIFT SEC 3: DAIRY	CO	PO	PO1	PO1	PO1								
TECHNOLOGY		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Η	Н	Μ	Μ	Μ	L	Μ	Μ	Н	Μ	Μ	Н
	CO2	Η	Н	Н	Μ	Μ	L	Μ	Μ	Μ	L	Н	Н
	CO3	Μ	Н	Н	Μ	Η	L	L	Μ	Н	L	Н	Н
	CO4	Η	Н	Н	Μ	Η	L	H	Н	Н	Μ	Μ	Н
	CO5	Μ	Μ	Μ	Μ	Μ	Η	Μ	Η	Η	Н	Н	Μ

HSIFT SEC 4: FOOD	СО	PO	PO1	PO1	PO1								
MICROBIOLOGY		1	2	3	4	5	6	7	8	9	0	1	2
SAFETY AND	CO1	Η	Н	Μ	Н	Μ	Μ	Η	Μ	Η	Μ	Μ	Μ
QUALITY CONTROL	CO2	Μ	Н	Μ	Μ	Η	Μ	Μ	Η	Н	Μ	Н	Н
	CO3	Μ	Н	Η	Н	Η	Μ	Μ	Μ	Η	Η	Μ	Н
	CO4	Μ	Н	Μ	Μ	Μ	Μ	Μ	Η	Н	Η	Μ	Μ
	CO5	Η	Η	Η	Μ	Η	Μ	Η	Η	Η	Μ	Η	Η

HSIFT SEC 5: FOOD	СО	PO	PO1	PO1	PO1								
DEHYDRATION		1	2	3	4	5	6	7	8	9	0	1	2
TECHNOLOGY	CO1	Н	Μ	Μ	Μ	Η	Μ	Н	Н	Н	Η	Μ	Н
	CO2	Η	Η	Η	Н	Η	H	H	Η	Н	Η	Η	Μ
	CO3	Μ	Н	Η	Н	Н	Μ	Н	Η	Н	Η	Н	Μ
	CO4	Η	Н	Η	Η	Η	Μ	H	Η	Η	Η	Η	Н
	CO5	Μ	Η	Η	Η	Η	Н	Η	Η	Η	Η	Н	Н

HSIFT SEC 6: External	CO	PO	РО	PO	PO	PO	PO	PO	PO	РО	PO1	PO1	PO1
Elective		1	2	3	4	5	6	7	8	9	0	1	2
EE 1:	CO1	Η	Μ	Μ	Μ	Μ	L	Η	Η	L	L	L	Μ
NUTRACEUTICALS	CO2	Μ	Н	Н	Η	Н	Н	Η	Η	Μ	Μ	Μ	Н
	CO3	Η	Н	Н	Н	Η	Н	Н	Н	Н	Μ	Н	Μ
	CO4	Η	Н	H	H	Η	Μ	H	H	Н	H	H	H
	CO5	Μ	Η	H	H	Η	H	Η	Н	Η	Η	Μ	Μ

HSIFT SEC 6: External	СО	PO	PO1	PO1	PO1								
Elective		1	2	3	4	5	6	7	8	9	0	1	2
EE 2: NUTRITIONAL	CO1	L	Μ	Μ	Μ	Μ	L	Μ	Н	Н	L	Н	Н
ASSESSEMENT	CO2	Μ	Н	Μ	Η	Η	L	L	Н	Н	Μ	Н	Μ
	CO3	Μ	Μ	Μ	Η	Η	L	Μ	Μ	L	L	Μ	Н
	CO4	Η	Η	Η	Η	Η	L	Μ	Μ	Μ	Μ	Н	Н
	CO5	Η	Η	Н	Η	Η	Μ	Μ	Μ	Η	L	Μ	Μ

SEMISTER-VI

HSIFT SEC 7: FOOD	СО	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
QUALITY		1	2	3	4	5	6	7	8	9	0	1	2
ASSURANCE	CO1	Η	H	H	Η	Η	Μ	Μ	Η	Μ	Μ	Μ	Н
	CO2	Η	H	H	Η	Η	H	Η	Η	Η	H	H	Μ
	CO3	Η	H	H	Η	Η	H	Η	Η	Η	H	H	Η
	CO4	Η	H	H	Η	Η	H	Η	Η	Η	H	H	Η
	CO5	Н	Н	Н	Н	Η	H	Н	Η	Н	Н	H	Н
HSIFT SEC 8:	СО	PO	PO	PO	PO	PO	PO	PO	PO	PO	PO1	PO1	PO1
HSIF1 SEC 8:	CO	PO 1	PO		PO	PO 5	PO	PO 7	PO o	PO	POI		
FERMENTATION	001			3	4	5	0		ð 10	9	0		<u> </u>
TECHNOLOGY	CO1	Μ	H	H	H	H	L	Μ	Μ	H	H	H	H
	CO2	Μ	H	H	Η	Η	L	Μ	Μ	Μ	H	H	H
	CO3	Μ	Μ	H	Η	Η	Μ	Μ	Η	Η	Н	H	Н
	CO4	Η	H	H	H	Η	Μ	Μ	Η	H	Η	H	Η
	CO5	Η	H	H	H	Η	Μ	Μ	Η	Η	H	H	H

HSIFT SEC 9: FOOD	CO	PO	PO1	PO1	PO1								
TOXICOLOGY		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Η	Н	Η	Н	Η	Μ	Μ	Η	Η	Η	Μ	Μ
	CO2	Н	Н	Н	Н	Η	Μ	Μ	Н	Н	Μ	Μ	Μ
	CO3	Н	Н	Н	Н	Η	Н	Н	Н	Н	Η	Н	L
	CO4	Н	Н	Н	Н	Η	Н	Н	Н	Н	Η	Μ	L
	CO5	Μ	Η	Н	Н	Μ	Н	Η	Н	Η	Н	Н	Μ

SEMISTER-VII

HSIFT 703: RESEARCH	CO	PO	PO1	PO1	PO1								
METHODOLOGY AND		1	2	3	4	5	6	7	8	9	0	1	2
STATISTICS	CO1	Н	Η	Н	Н	Μ	Μ	Μ	H	Μ	L	Η	Η
	CO2	Н	Η	Н	Н	Η	L	Μ	H	Н	L	L	Μ
	CO3	Η	Η	Η	Η	Η	L	Μ	H	Μ	Μ	Η	Η
	CO4	H	H	Η	Η	Η	Μ	Μ	H	Μ	Μ	Η	Η
	CO5	Η	Η	Η	Η	Η	Η	Η	Η	Н	Μ	Μ	Μ
	CO6	Η	Η	Η	Η	Η	L	Μ	H	Η	Μ	L	Μ

SEMISTER-VIII

HSIFT 801:	СО	PO	PO1	PO1	PO1								
ENTREPRENEURSHIP		1	2	3	4	5	6	7	8	9	0	1	2
DEVELOPMENT	CO1	Μ	L	L	L	Η	Μ	Н	Η	H	Μ	Μ	L
	CO2	L	Μ	Μ	Μ	Μ	Μ	Н	Η	H	Μ	Η	L
	CO3	L	Н	Η	Η	Н	Μ	Η	Η	H	Μ	Н	L
	CO4	L	Н	Η	Η	Н	Η	Η	Η	H	Μ	Η	Μ
	CO5	L	Η	Η	Η	Η	Η	Η	Η	H	Μ	Н	Μ

SEMISTER-IX

COMMUNICATIVE	СО	PO	PO1	PO1	PO1								
ENGLISH		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Μ	Н	Μ	Μ	Η	Μ	Η	Μ	Μ	Μ	Η	Μ
	CO2	L	Μ	Μ	L	Μ	L	Μ	Μ	L	L	Μ	Μ
	CO3	Η	Н	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Μ	Η	Μ
	CO4	L	Μ	Μ	Μ	Μ	L	Μ	Η	L	Μ	Η	Μ
	CO5	L	L	Μ	L	Μ	L	Μ	Η	L	Μ	Н	Μ

HSIFT 901:	CO	PO	PO1	PO1	PO1								
NUTRITIONAL		1	2	3	4	5	6	7	8	9	0	1	2
BIOCHEMISTRY	CO1	H	H	Н	H	Η	Н	Н	Η	Н	Μ	Н	Μ
	CO2	Μ	H	Μ	Μ	Η	Μ	Μ	Μ	Μ	Μ	Н	Μ
	CO3	H	H	Μ	Μ	Η	Μ	Μ	Η	Η	Η	Μ	H
	CO4	Н	H	Н	H	Н	Н	Μ	Η	Н	Η	Н	H
	CO5	H	Μ	Н	Μ	Η	Н	Μ	Η	Н	Μ	Н	H

HSIFT 902: FOOD	CO	PO	РО	PO1	PO1	PO1							
CHEMISTRY		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	H	H	Μ	Μ	Μ	Н	Μ	Н	Μ	L	L	Н
	CO2	Η	H	Η	H	Н	Н	Η	Н	Н	L	Η	Н
	CO3	Η	H	Μ	Μ	Μ	Н	Μ	Н	Μ	L	L	Н
	CO4	Η	Η	Μ	Μ	Μ	Η	Μ	Η	Μ	L	L	Н
	CO5	H	Μ	Μ	Μ	Μ	L	Μ	H	Н	L	L	Μ

HSIFT 903 UNIT	СО	PO	PO1	PO1	PO1								
OPERATION		1	2	3	4	5	6	7	8	9	0	1	2
MANAGEMENT FOR	CO1	Н	Н	Н	Н	Η	Μ	Μ	Н	Μ	Μ	Μ	L
FOOD TECHNOLOGY	CO2	Н	Н	Н	Н	Η	Μ	Н	Н	Μ	H	Μ	Μ
	CO3	Н	Н	Н	Н	Η	Н	Н	Н	Н	H	Н	Μ
	CO4	Μ	Η	Η	Η	Η	Μ	Η	Η	Η	H	Μ	Μ
	CO5	Η	Η	Η	Η	Η	Η	Η	Η	Η	H	Н	Η

HSIFT 904	СО	PO	PO1	PO1	PO1								
TECHNOLOGY OF		1	2	3	4	5	6	7	8	9	0	1	2
BEVERAGES	CO1	Η	Μ	Μ	Н	Η	Μ	Μ	Η	Н	Μ	Μ	H
	CO2	Η	Μ	Н	Н	Η	Μ	Н	Η	Н	Η	Η	Μ
	CO3	Η	Η	Η	Η	Η	Μ	Η	Η	Η	Η	Μ	L
	CO4	Μ	Η	Η	Η	Η	Η	Μ	Η	Η	Η	Μ	L
	CO5	Μ	Η	Η	Η	Η	Η	Η	Η	Η	Η	Η	Μ

SEMISTER-X

FOUNDATION	СО	PO	PO1	PO1	PO1								
COURSE IN		1	2	3	4	5	6	7	8	9	0	1	2
COMPUTER	CO1	H	Μ	Μ	Μ	Η	L	Μ	Η	Μ	L	Η	H
APPLICATIONS	CO2	Μ	Μ	Μ	Η	Η	L	Μ	Η	Μ	L	Η	H
	CO3	Μ	Н	Μ	Μ	Η	L	Μ	Μ	Μ	L	Μ	Μ
	CO4	L	Μ	Μ	Μ	Μ	L	Μ	Η	Μ	L	Μ	Μ
	CO5	Μ	Μ	Μ	Η	Μ	L	Μ	Η	Μ	L	Μ	Μ

HSIFT 1001 FOOD	СО	PO	PO1	PO1	PO1								
ENGINEERING		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Н	Н	Н	Η	Н	Н	Μ	Μ	Н	Μ	Μ	L
	CO2	Η	Μ	Μ	Μ	Μ	Μ	Η	Н	Η	Μ	Н	Μ
	CO3	Μ	Η	Н	Η	Η	Н	Η	Н	Η	Η	Н	Μ
	CO4	Μ	Н	Н	H	Н	Μ	Н	Н	Н	Н	Η	Μ
	CO5	H	Η	Η	H	H	Μ	Н	Η	Μ	Μ	Η	H

HSIFT 1002 FOOD	СО	PO	PO1	PO1	PO1								
ANALYSIS		1	2	3	4	5	6	7	8	9	0	1	2
	CO1	Η	Η	Μ	Η	Η	L	Н	Η	Η	Μ	L	Μ
	CO2	Η	Η	Η	Η	Η	Μ	Н	Η	Μ	L	Μ	Μ
	CO3	Η	Η	Η	Η	Η	Μ	Н	Η	Μ	L	Μ	Μ
	CO4	Μ	Μ	Η	Η	Η	L	Μ	Μ	Η	L	L	Μ
	CO5	Μ	Μ	H	Н	H	L	Μ	Μ	Н	L	L	Μ

HSIFT 1003	СО	PO	PO1	PO1	PO1								
TECHNOLOGY OF FATS		1	2	3	4	5	6	7	8	9	0	1	2
AND OIL SEEDS	CO1	Η	Μ	Μ	Н	Н	Μ	Н	Н	Н	Μ	Η	Μ
	CO2	Η	H	Η	Н	Н	Μ	Н	Н	Н	Н	Η	Μ
	CO3	Η	H	Η	Н	Н	Η	Н	Н	Н	Н	Μ	L
	CO4	Μ	Н	Н	Η	Η	Н	Н	Н	Μ	Μ	Η	Μ
	CO5	Η	H	Η	H	Η	H	Н	H	Н	Н	Μ	Μ

	HSIFT 1004 FISH &	CO	PO	PO1	PO1	PO1								
	MEAT PROCESSING		1	2	3	4	5	6	7	8	9	0	1	2
	TECHNOLOCY	CO1	H	L	Η	L	Н	Μ	L	Η	Η	L	L	L
	TECHNOLOGI	CO2	H	L	L	L	L	Н	L	L	Η	L	Μ	Н
		CO3	H	L	Η	Μ	Н	Μ	Μ	Η	Η	Μ	L	Μ
		CO4	H	Μ	Η	Μ	Н	Н	L	Η	Η	Μ	L	L
		CO5	Η	L	Μ	Н	Μ	Η	L	Н	Η	L	Μ	L
-			-					-			-			
	HSIFT 1005	СО	PO	PO1	PO1	PO1								

HSIF1 1005	CO	PO	PO	PO	PO	PU	PO	PO	PO	PO	POI	POI	POI
THERAPEUTIC FOOD		1	2	3	4	5	6	7	8	9	0	1	2
TECHNOLOGY	CO1	Η	Н	Μ	Μ	Η	Μ	Μ	Η	Η	Η	Н	Н
	CO2	Η	Η	Μ	Η	Н	Μ	Μ	Η	Μ	Η	Н	Н
	CO3	Η	Н	Η	Μ	Η	Μ	Μ	Η	Η	Μ	Η	Н
	CO4	Μ	Η	Н	Μ	Μ	Μ	Μ	Η	Μ	Μ	Н	Н
	CO5	Η	Η	Η	Η	Μ	Μ	Μ	Η	Μ	Μ	Η	Н