

SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE

(An Autonomous Institution)

(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, Accredited by NAAC with "A" Grade)
Madagadipet, Puducherry - 605 107



SCHOOL OF ARTS AND SCIENCE

Department of Food Science

B.Sc. Nutrition and Dietetics $\frac{ANNEXURE-I}{(Curriculum \& Syllabi for V, VI Sem)}$

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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	SEMESTER -V											
S.	Course			Р	erio	ods			Max.N	larks		
No	Code	Course Title	Category	ategory L T P		Credits	CAM	ESM	Total			
Theor	у											
1	A20NDT515	Dietetics I	DSC	4	0	0	4	25	75	100		
2	A20NDT516	Public Health Nutrition	DSC	4	0	0	4	25	75	100		
3	A20NDT517	Food Product Development and Marketing	DSC	4	0	0	4	25	75	100		
4	A20NDE507	Food Service Management	DSE	3	0	0	3	25	75	100		
Practi	ical		1									
5	A20NDL518	Dietetics I Practical	DSC	0	0	4	2	50	50	100		
6	A20NDL519	Food Product Development Practical	DSC	0	0	4	2	50	50	100		
Skill E	nhancement Co	urse	•									
7	A20NDS505	In-Plant Training / Internship	SEC	0	0	4	2	100	0	100		
	_						21	300	400	700		

		SEMES ⁻	TER-VI							
S.	Course	Occupant Title	0-1	Р	eric	ods	0		Max.M	arks
No	Code	Course Title	Category	L	Т	Р	Credits	CAM	ESM	Total
Theor	у		•							
1	A20NDT620	Dietetics II	DSC	4	0	0	4	25	75	100
2	A20NDT621	Sports Nutrition	DSC	4	0	0	4	25	75	100
3	A20NDT622	Nutrition in Critical Care	DSC	4	0	0	4	25	75	100
4	A20NDE609	Health Psychology	DSE	3	0	0	3	25	75	100
Practi	cal									
5	A20NDL623	Dietetics II Practical	DSC	0	0	4	2	50	50	100
6	A20NDP601	Project	DSC	0	0	10	5	40	60	100
Skill E	nhancement Co	urse								
7	A20NDS606	Basics in Research Methodology	SEC	2	0	0	2	100	0	100
			-	•	•		24	290	410	700

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DISCIPLINE SPECIFIC ELECTIVES												
				Р	erioc	ls	0	Max.Marks		arks		
SI.No	Course Code	CourseTitle	Category	L	T	Р	Cred- its	CAM	ESM	Total		
Discip	oline Specific E	lectives (DSE - I) - offered	in Third Sen	nest	er							
1	A20NDE301	Food Safety and Sanitation	DSE	3	0	0	3	25	75	100		
Discipline Specific Electives (DSE - II) - offered in Fourth Semester												
1	A20NDE402	Nutritional Assessment & Surveillance	DSE	3	0	0	3	25	75	100		
2	A20NDE403	Food Service & Layout	DSE	3	0	0	3	25	75	100		
3	A20NDE404	Nutrition for Women										
Discip	oline Specific E	lectives (DSE - III) - offered	l in Fifth Ser	nest	er							
1	A20NDE505	Resource Management	DSE	3	0	0	3	25	75	100		
2	A20NDE506	Food Analysis	DSE	3	0	0	3	25	75	100		
3	A20NDE507	Food Service Management	DSE	3	0	0	3	25	75	100		
Disci	ipline Specific I	Electives (DSE - IV) - offere	ed in Sixth S	eme	ster							
1	A20NDE608	Basics in Research Methodology	DSE	3	0	0	3	25	75	100		
2	A20NDE609	Health Psychology	DSE	3	0	0	3	25	75	100		
3	A20NDE610	Human Development	DSE	3	0	0	3	25	75	100		

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Department	Food	Science	Progran	nme: B	S.Sc Nutr	ition and Di	etetics		
Semester	Fifth		Course	Catego	ory Code:	: DSC *Fr	nd Semest	er Exam 1	vpe: TF
				ods / W		Credit		ximum M	
Course Code	A20N	DT515	L	T	Р	С	CAM	ESE	TM
Course Name	DIETET	ICS – I	4	0	0	4	25	75	100
Prerequisite	Diet m	anagement & Role of Dietician	 S					<u> </u>	
Course	1.	To provide comprehensive know diets.	ledge on pri	nciples	and pla	nning of the	rapeutic		
Objectives	2.	To determine the knowledge on	nutritional r	eeds o	of febrile	conditions.			
	3.	To acquire knowledge on nutrition	onal needs o	f Gastr	o intesti	nal diseases	•		
	4.	To determine the nutritional sup	port for Live	r disor	ders.				
	5.	To identify the knowledge on die metabolism.	tary manage	ement	for Inbo	rn errors of			
	On cor	npletion of the course, the stude						1	apping st Level)
Course	CO1	Get an idea about the concept	of therapeut	tic diet	•			ا	K2
Outcome	CO2	Identified the dietary managem	ent for febr	ile pati	ents.			l	K3
	CO3	Understand the dietary principl	les for gastr	o intes	stinal dis	eases		l	K3
	CO4	Understand the role played by	dietary mea	sures t	o recove	er liver disor	ders	l	K3
	CO5	Get acquainted with nutritional	support for	Inborr	n errors (of metabolis	m.	I	K3
UNIT-I	Diet 1	herapy				Periods: 12	2		
a) Classi solid chole	fication of diet, Soft of sterol diet.	, History of Dietetics, Objectives and Therapeutic Diets - Routine Hospital diet, Bland diet, High & Low-calorie d Therapy – Physical Activity, Exercise,	Diet – Clear iet, High & Lo	liquid d	liet, Full f ein diet, F	ligh & Low fib			CO1
UNIT-II	Diet i	n Fever and Infectious Disease				Periods: 12	2		
		 Overview Diagnosis, Causes, Sym malaria, tuberculosis, AIDS. 	nptoms, Dieta	ary Mar	nagement	of Febrile	conditions	_	CO2
UNIT-III	Diet i	n Gastro Intestinal Disease				Periods: 12	2		
Gastrointestina	ıl Diseases	s – Overview Diagnosis, Causes, Sym	ptoms, Dietar	y mana	gement fo	or:			
Surge	ry.	sease – Gastro Esophageal Reflex D			_		Gastric		CO3
		ses – Constipation, Diarrhea, Dumpin							
	-	owel Diseases - Ulcerative Colitis - d flatulence.	Cronn's Dis	ease, I	irritable E	soweiSyndron	ne,		
UNIT-IV	Diet i	n Liver and Gall Bladder Diseases				Periods: 12	2		l
Cirrho manag	sis of liver, gement.	s of Liver, Factors responsible for liver Hepatic Encephalopathy - Overview eases - Cholecystitis, Cholelithiasis.	-			-	tis,		CO4

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UNIT-V	Inborn Er	rors of Metabolism	F	Periods: 12	
		Metabolism – Dietary Management Biphosphatase Deficiency, Menke's	t for Phenylketonuria, Galactosaem Disease and Wilson's Disease.	ia, Fructosuria,	CO5
l1	iods: 60	Tutorial Periods: -	Practical Periods: -	Total Periods: 60	

Text Books

- 1. Srilakshmi, B., Nutrition Science, New Age International (P) Ltd., New Delhi, 2017.
- 2. Mahtab, S, Bamji, Kamala Krishnasamy, G.N.V. Brahmam, Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi, 2015
- 3. Swaminathan, M., Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore, 2015.

Reference Books

- 1. Dietary Guidelines for Indians, ICMR, National Institute of Nutrition, Hyderabad, 2011.
- 2. Gordon M. Wardlaw, Paul M.Insel, Perspectives in nutrition 11th edition, Mosby- year Book,Inc.St.Louis,Missouri, 2019
- 3. Cornne H. Robinson Marilyn R. Lawler, Normal and Therapeutic Nutrition, Mac MillanPublishing Company, New York, 1986.
- 4. F.P. Antia, Clinical Dietetics and Nutrition, Oxford University press, 1989.
- 5. Krause, M.V. and Hunesher, M.A., Food, Nutrition and Diet Therapy, 14th Edition, W.B. Saunders Company, Philadelphia, London, 2016.

Web References

https://bowenstaff.bowen.edu.ng/lectureslides/1611582925.pdf

https://naturallyyours.in/blogs/blog/nutritional-management-in-fever

https://medlineplus.gov/ency/article/002441.htm

https://liverfoundation.org/health-and-wellness/healthy-lifestyle/liver-disease-diets/

* TE – Theory Exam, LE – Lab Exam





Department	Food 9	Science	Program	me: B .	.Sc Nutri	tion and D	ietetics			
Semester	Fifth		Course C	atego	ry Code:	DSC *E	nd Semest	er Exam T	ype: TE	
Course Code	A20N	DT516	Perio	ds / W	-	Credit		ximum M	····· 7 ·····	
			L	T	Р	С	CAM	ESE	TM	
Course Name	PUBLI	C HEALTH NUTRITION	4	0	0	4	25	75	100	
Prerequisite	Basic k	nowledge in community health r	nutrition and	defici	encv disc	orders				
	···• !	Identify the concepts and scope of P								
Course		Determine the nutritional problems								
Objectives		Determine the nutritional status of the	e community							
		Identify the hazards in community he	-							
		Identify the preventive measures.	- Carta I.							
	i	pletion of the course, the students	s will be able to	 O				DT M	apping	
		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,						1	st Level)	
Course	CO1	Get an idea about the concepts and	d scope of Pub	olic hea	alth and co	ommunity nu	utrition		(2	
Outcome	CO2	Identified the nutritional problems in	n India.					ŀ	(3	
	CO3	Understand the steps to identify the		atus of	the comm	unity			K3	
	CO4 Determined the various hazards in community health									
	CO5 Get acquainted with the preventive measures taken by the Government									
UNIT-I	Introd	uction to Public Health Nutrition				Periods: 1	2	•	(3	
		in National Development, Role of Nu	•			-				
UNIT-II		onal problems confronting the con utrition- Prevalence, etiology, clinical				Periods: 1				
Iron Deficie food source Iodine Defic Fluorosis- p Vitamin A c sources.	ency Aner es. ciency Dis prevalency deficiency	mia- prevalence, etiology, clinical features and prevalence, etiology, clinical features and prevalence, etiology, clinical features and prevalence, etiology, clinical features - prevalence, etiology, clinical feature	atures, prophyleatures and preention. es, prophylaxis	axis pr eventio progra	ogramme in through	and prever food source prevention	ntion througes.		CO2	
,										
UNIT-III		nination of consumption and nutrit	tional status o	f the		Periods: 1	2		<u> </u>	
Nutrition and Improvemen	comm d Behaviont of nutrit	<u>-</u>	food behavior ervation and ed	ucatior					CO3	
Nutrition and Improvemer Weaning foo	comm d Behaviont of nutrit ods-plann	unity or - Factors affecting food habits and fition in community - fortification, conse	food behavior ervation and ed	ucatior			ew.		соз	
Nutrition and Improvement Weaning foot UNIT-IV Epidemiolog	comm d Behavio nt of nutrit ods-plann Nutritio y —Conce	unity or - Factors affecting food habits and fittion in community - fortification, conseining, formulating and preparing imported in Epidemiology Research Methods opt, approaches, types and significance	food behavior ervation and ed tance of correct ce. Principles o	ucatior t and ti	mely wea	ning - Revi	ew.		CO3	
Improvemer Weaning for UNIT-IV Epidemiolog Measuremer	comm d Behavio nt of nutrit ods-plann Nutritio y —Conce nt issues.	unity or - Factors affecting food habits and faction in community - fortification, conseing, formulating and preparing import	food behavior ervation and ed tance of correct ce. Principles on non-communic	ucatior t and ti	mely wea	ning - Revi	ew.			





National organizations- ICMR-NIN, ICAR, CHEB, CSWB, SSWB, NNMB, CFTRI, DFRL, NFI and NIPCCD. International organizations- FAO, WHO, UNICEF, WFP, CARE, GAIN, AFPRO, CWS, CRS, and World Bank. Economics of Nutrition. Malnutrition and its economic consequences.

Food security. Food production and food pricing. Recent advances in community nutrition research- Fortification

CO5

& enrichment of foods.

Lecture Periods: 60 Tutorial Periods: - Practical Periods: - Total Periods: 60

Text Books

- 1. Boyle M.A.(2021). Community Nutrition in Action. 8th Edition. Cengage Learning, USA.
- 2. Steyn N. and Temple N.J. (2016). Community Nutrition for Developing Countries. Athabasca University Press, Canada.
- 3. Park K. (2021). Textbook Of Preventive And Social Medicine, 26th Edition. Banarsidas Bhanot Publisher, Madhya Pradesh, India.

Reference Books

- 1. Gibney M.J., Margetts B.M., Kearney J.M., Arab L. (2015). Public Health Nutrition. John Wiley and Sons, New York.
- 2. Stein N. (2014). Public Health Nutrition- Principles and Practice in Community and Global Health. Jones and Bartlett Learning, LLC Publishers, U.S.A.
- 3. Welch A.A., Kearney J.M., Buttriss J.L. and Lanham S.A. (2017). Public Health Nutrition, 2nd Edition. Wiley, U.K.
- 4. Nutrition- Concepts and Controversies, by Sizer F.S. and Whitney E, 15th Edition, 2016, Wadsworth Cengage Learning, USA.
- 5. Understanding Nutrition, by Whitney E. and Rolfes S.R,11th Edition, 2018, Wadsworth Cengage Learning, USA.

Web References

https://www.godigit.com/health-insurance/nutrition/nutritional-problems-in-india https://www.mdsuajmer.ac.in/econtents/846_nutritional%20problems%20in%20India.pptx https://www.researchgate.net/publication/317305228_NUTRITIONAL_PROBLEMS_in_India_world_ways_to_combat

* TE – Theory Exam, LE – Lab Exam

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Department	nt Food Science Programme: B.Sc Nutrition and Dietetics									
Semester	Fifth		Course DSC	Categ	ory Coo	de: *En TE	id Semes	ster Exan	n Type:	
Course Code	A 20N	DT517	Perio	ods / W	/eek	Credit	Ma	ximum M	1arks	
Course Code	AZUN	01317	L	Т	Р	С	CAM	ESE	ТМ	
Course Name	FOOD I	PRODUCT DEVELOPMENT AND STING	4	0	0	4	25	75	100	
Course	1.	To understand and know various Science and Technology	us aspects	s of foc	od produ	ıct develop	ment inc	luding Fo	ood	
Objectives	2.	To understand the principles in				nd design				
	3.	, , , , , , , , , , , , , , , , , , , ,								
	4.		•							
	5.									
Prerequisite Course		uct development, consumer view mpletion of the course, the st				sensory ev	aluation	(Hig	apping ghest vel)	
Outcome CO1 Identified various aspects of food product development including Food Science and Technology									K2	
	CO2	Get acquaintance with the pri	inciples in	produ	ct devel	opment an	d design	ŀ	(3	
	CO3	Frame the generation of new	product ic	leas.				ŀ	(3	
	CO4	Understand the different steps	sinvolved	in testi	ing and	evaluation		k	(4	
	CO5	Develop entrepreneurship skills	for setting (up sma	II scale fo	ood industri	es	P	(3	
UNIT-I	Intro	duction to Food Product Deve	lopment			Periods: 1	12	İ		
Definiti – socia (Corpo	ion, clas al conce rate, m	oduct development, Phases in Fassification, characterization, Facerns, health concerns impact of tarket place, technological and gial Change as a base for New P	ctors in flue technology jovernmen	ency no and ratal infl	ew prod narket p uences)	uct develop lace influe			CO1	
UNIT-II	Recip	pe Development				Periods: '	12			
Traditio	onal Fo	ods, Weaning Foods, Convenie	nce Foods	s, RTE	, RTS, E	Extruded Fo	oods,		CO2	
	•	utritional Supplements, Functior	-				J	-		
1		 Emerging Foods, Alternate to 	meat Pro	teins,	Sports f	oods, Food	ds for De	fence		
1	•	ce Foods.								
Newer	technic	ques adopted in product develop	oment.							
UNIT-III		ration of New Product Ideas				Periods: 1	12			
Polling of idea	, memb s –com	es of ideas-census data, magaz pership list, seller/retailer and dis petitors, food conference/exhibi s, trade literature, government p	stributor, te tion, trade	elepho shows	ne and les	mails. Exte search sym	iposia,		CO3	

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UNIT-IV Screening and Evaluation

Periods: 12

Screening and refining the screening procedure for the product-Objectives of screening. Standardization, Portion Size and Control -Sensory Evaluation - Shelf life testing. Nutrient Analysis. Food standards needed to introduce new product.

CO4

UNIT-V Marketing of Food Products

Periods: 12

Market Sector perspective and market research, Cost Calculation, Advertising methods, Product Sales, Product License, Legal specifications, Consumer Behaviour and Acceptance

CO5

- Institutional Support for Entrepreneurship Development

Lecture Periods: 60

Tutorial Periods: -

Practical Periods: -

Total Periods: 60

Text Books

- 1. Srilakshmi, B. Second Edition, Food Science, New Age International (P) Limited Publishers, New Delhi. 2016
- 2. Harry T. Lawless, Hildegarde, Sensory Evaluation of Food Principles and Practices, Second Edition, Springer Science, 2010.
- 3. Joshi, V.K Sensory Science: Principles and Applications in Food Evaluation, 2016.

Reference Books

- 1. Hutenwigs, B.J. Food Color and Appearance, Published by Blackie Academic and Professional, London, 2010.
- 2. Howard R. Beckley, Jacquiline, H. Sensory and Consumer Research in Food Product Design and Development, 2016
- 3. Sadasivam, S. and Manickam, A. Biochemical Method, Second Edition, New Age International P. Ltd., Publishers, New Delhi, 2013.
- 4. Raghuramulu, N., Madhavannair, K. and Kalyana Sundaram, National Institute of Nutrition, 2013, A Manual of Laboratory Techniques, Hyderabad, 500007
- 5. Bi, Jian, Sensory Discrimination Tests and Measurements: Statistical Principles, Procedures and Tables, 2016.

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https://www.foodresearchlab.com/what-we-do/new-product-development-service/new-food-product-development/

https://www.foodresearchlab.com/what-we-do/new-product-development-service/

https://www.sciencedirect.com/book/9781845697228/food-product-development

http://niftem-t.ac.in/food product development.php

* TE – Theory Exam, LE – Lab Exam

Department	Food	Science	Programme: B.Sc Nutrition and Dietetics							
Semester	Fifth		Course	Catego	ry Code	: DSE *E	nd Semest	er Exam Ty	ype: TE	
Course Code	A20N	IDE507	Perio	ds / W	eek	Credit	Ma	ximum Ma	arks	
course coue	AZUN		L	Т	Р	С	CAM	ESE	TM	
Course Name	FOOD	SERVICE MANAGEMENT	3	0	0	3	25	75	100	
	1.	. Gain knowledge about various	s types of foo	d servic	`es					
Course	2.			u						
Objectives	3.									
	4.									
	5.			•••••	s of Mai	nagement.				
Prerequisite		service, food production, menu								
•		mpletion of the course, the stude						BT Ma (Highes	pping t Level	
Course	CO1	Understand the types of food s	services					K	2	
Outcome	CO2	CO2 Acquired knowledge about the food production and management. K3								
	CO3	Understand the various food to	rends and ser	vice.				K	3	
	CO4	Understand the procedures fo	r selection ar	nd use o	of equip	ments and	layout	К	2	
	CO5	Get acquainted with the pprinc	ciples and fun	ctions	of Mana	agement.		К	3	
UNIT-I	Food	Service Institutions	Periods: 09							
	<u>i</u>	rent types of institutional food	d service in	operat	ion - ()-		
commerci	ial - clas	sification based on functional $-$	profit oriente	d, serv	ice orie	nted and p	ublic healt	h	CO1	
,		ood Service Institutions.								
		ormal and Informal types, Styles	of Food Servi	ce – Ce	ntralize	d and Dece	ntralized			
System of	·····•									
UNIT-II	<u>i</u>	Management				Periods: 0	19			
Eanda	nanagen									
	_	nent- Characteristics of foods, nu			food p	urchase, inv	entory ma	nagement	, CO2	
menu _l	planning	g, food production, food service, v	waste manag	ement.	·	urchase, inv	entory ma	nagement	, CO2	
menu _I Need b	planning pased sp	g, food production, food service, v ecific units- Dietary, catering, ins	waste manag	ement.	·			nagement	c, CO2	
menu Need b UNIT-III	planning pased sp Food	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends	waste manag titutional foo	ement. d servi	ce.	Periods: 0)9		., CO2	
menu _I Need b UNIT-III Styles of fo	planning pased sp Food ood serv	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends vice – Color, Table service, furnish	waste manag titutional foo ning, packing	ement. d servi	ce.	Periods: 0)9			
menu Need b UNIT-III Styles of fo restaurant	planning pased sp Food ood serv ts, hotel	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends vice – Color, Table service, furnish s, Motels, food courts and catering	waste manag titutional foo ning, packing ng services.	ement. d service	ce. s, servic	Periods: 0 te stations -	99 - hospitals,			
menu Need b UNIT-III Styles of fo restaurant Services -	planning based sp Food ood serv ts, hotel banquet	g, food production, food service, vecific units- Dietary, catering, insomerices and its Trends vice – Color, Table service, furnishes, Motels, food courts and catering and party setting and services, to	waste manag titutional foo ning, packing ng services. herapeutic d	ement. d services services	ce. s, servic me rem	Periods: 0 e stations -	9 - hospitals, itional cool	kery,	соз	
menu Need b UNIT-III Styles of for restaurant Services - internatio	planning pased sp Food ood serv ts, hotel banquet nal cuisi	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends vice – Color, Table service, furnish s, Motels, food courts and catering	waste manag titutional foo ning, packing ng services. herapeutic d	ement. d services services	ce. s, servic me rem	Periods: 0 e stations -	9 - hospitals, itional cool	kery,	соз	
menu Need b UNIT-III Styles of forestaurant Services - internatio catering, r	planning pased sp Food ood serv ts, hotel banquet nal cuisi robotic f	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends vice – Color, Table service, furnish s, Motels, food courts and catering and party setting and services, tones, current trends- air catering,	waste manag titutional foo ning, packing ng services. herapeutic d	ement. d services services	ce. s, servic me rem	Periods: 0 e stations -	9 - hospitals, itional cool nity kitche	kery,	соз	
menu p Need b UNIT-III Styles of for restaurant Services - internation catering, r	planning pased sp Food ood serv ts, hotel banquet nal cuisi robotic f	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends vice – Color, Table service, furnish s, Motels, food courts and caterint and party setting and services, tones, current trends- air catering, ood service, virtual food service.	waste manag titutional foo ning, packing ng services. herapeutic d food service	ement. d service service iets, ho at old a	s, servic	Periods: 0 se stations - nedies, tradi nes, commu Periods: 0	ng - hospitals, itional cool nity kitche	kery,	CO3	
menu p Need b UNIT-III Styles of forestaurant Services - internation catering, r UNIT-IV Kitchen sp	planning pased sp Food ood serv ts, hotel banquet nal cuisi robotic fo	g, food production, food service, vecific units- Dietary, catering, ins Services and its Trends vice – Color, Table service, furnish s, Motels, food courts and catering and party setting and services, to nes, current trends- air catering, ood service, virtual food service. Layout and Equipments	waste manag titutional foo ning, packing ng services. herapeutic d food service	ement. d service service iets, ho at old a	s, services, ser	Periods: 0 re stations - redies, tradi res, commu Periods: 0 rent work a	ng - hospitals, itional cool nity kitche	kery,	соз	





Management – Principles, Functions and tools of Management Personnel Management - Recruitment, Selection, Induction, Employee facilities and benefits. Training, Motivation and Leadership.

CO5

Lecture Periods: 45 Tutorial Periods: - Practical Periods: - Total Periods: 45

Text Books

- 1. Mohini Shetty, Institutional food management, New age International Publishers, 2016.
- 2. West ,BB, Wood "Food service in Institutions" ,Johnwiley & Sons,New York ,2015.
- 3. Sethi and Mahan S.-Catering Management and integrated approach, Johnwiley & Sons, New York, 2010.

Reference Books

- 1. Kotschevar, L. H. and Terrel, M. E. (1997). Food Service Planning: Layout and Equipment. John Wiley.
- 2. Minor, L. J., Cichy, R. F. (1984). Food Service Systems Management, Connecticut AVI Publ.
- 3. Kazarian, E. A. (1989). Food service facilities planning 3rd ed. New York. Van Nostrandand Reinhold.

Web References

https://www.ecpi.edu/blog/what-is-food-service-management-and-why-do-i-need-a-degree-for-ithttps://www.scitechnol.com/scholarly/food-service-management-journals-articles-ppts-list.phphttps://ziphaccp.com/en/food-service/food-service-management.html

* TE – Theory Exam, LE – Lab Exam

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Department	Food	Food Science Programme: B.Sc Nutrition and Dietetics										
Semester	Fifth		Course	Categor	y Code:	DSC *	End Semes	er Exam	Гуре: L E			
Course Code	A 20N	DL518	Perio	ods / We	eek	Credi	t Ma	ıximum M	1arks			
Course Code	AZUN	DL518	L	Т	Р	С	CAM	ESE	TM			
Course Name	DIETE	TICS – I PRACTICAL	0	0	4	2	50	50	100			
Prerequisite	Diet Pl	anning, Therapeutic Diet										
_	To ena	able the students to										
Course Objectives	1. 2.	 To deliver better understanding on the basic principles in diet planning. To promote skills and techniques in planning and preparation of therapeutic diets for various disease conditions. 										
	On cor	npletion of the course, the stu	udents will be a	ble to					lapping est Level)			
Course Outcome	CO1 Understand the basic principles involved in planning diets for different disease conditions.								К3			
	CO2	Plan and prepare diets to m specific disease conditions	eet out the qua	llity and	quantit	y require	ments for		К3			
	CO3		К3									
Experiments						Practica	ls - 30 hrs					

Planning and Preparation of diet in:

- 1. Routine Hospital Diets
- 2. Febrile conditions
- 3. Gastrointestinal Disease
- 4. Liver and Gall bladder disease
- 5. Addictive patient.

Text Books

- 1. Srilakshmi, B., Nutrition Science, New Age International (P) Ltd., New Delhi, 2017.
- 2. Mahtab, S, Bamji, Kamala Krishnasamy, G.N.V. Brahmam, Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi, 2015
- 3. Swaminathan, M., Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore, 2015.

Reference Books

- 1. Dietary Guidelines for Indians, ICMR, National Institute of Nutrition, Hyderabad, 2011.
- 2. Gordon M. Wardlaw, Paul M.Insel, Perspectives in nutrition 11th edition, Mosby- year Book,Inc.St.Louis,Missouri, 2019
- 3. Cornne H. Robinson Marilyn R. Lawler, Normal and Therapeutic Nutrition, Mac MillanPublishing Company, New York, 1986.
- 4. F.P. Antia, Clinical Dietetics and Nutrition, Oxford University press, 1989.
- 5. Krause, M.V. and Hunesher, M.A., Food, Nutrition and Diet Therapy, 14th Edition, W.B. Saunders Company,

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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Philadelphia, London, 2016.

Department	Food	Science Programme: B.Sc Nutrition and Dietetics											
Semester	Fifth		Course	Categor	y Code:	DSC *I	End Semest	er Exam	Гуре: L E				
Course Code	A20N	DI 519	Perio	Periods / Week			Ma	1arks					
Course Code	AZUN	DE313	L	Т	Р	С	CAM	ESE	TM				
Course Name	FOOD	PRODUCT DEVELOPMENT	0	0	4	2	50	50	100				
	PRAC	ΓΙCAL											
	······								<u> </u>				
Prerequisite		oduct Development and Sensor	y Evaluation										
	To ena	To enable the students to											
Course Objectives		To develop skills in product development											
	1	To understand the steps involved in costing											
	;	3. To learn sales techniques											
	On con	On completion of the course, the students will be able to											
								(Highest Level)					
Course	CO1	Identify suitable food groups t	for developin	g produ	cts			К3					
Outcome	CO2	Categorize the foods for deve	loping recipe	s and pr	eserved	foods			К3				
	CO3	Understand the steps involved	d in the prepa	ration o	f a new f	ood prod	uct		К3				
	CO4	Standardize the developed foo	d product for	large s	cale cool	king			К3				
	CO5	CO5 Learn marketing techniques and launch the developed products.											
Experiments		Practicals - 30 hrs											

Product Development and Standardization

- 1. Sensory evaluation of developed products using hedonic scales.
- 2. Cereal and Millet based foods
- 3. Health foods and nutritional supplements
- 4. Weaning foods
- 5. Convenience foods, RTS and RTE foods
- 6. Visit to food production and packaging unit of food industry

Text Books

- 1. Sudhir Gupta (2007). Handbook of Packaging Technology, Engineers India Research Institute, New Delhi
- 2. Khanaka, S.S., Entrepreneurial Development, S.Chand and Company Ltd, New Delhi, 2006.
- 3. Suja ,R.Nair(2014). Consumer Behaviour and Marketing Research, 1st edition, Himalaya publishers.

Reference Books

- 1. Hmacfie, (2007). Consumer led food Product Development, Weedhead publishing ltd., UK
- 2. Fuller, Gordon, W(2005). New Food Product Development, 2nd edition, CRC press, Boca, Raton, Florida,
- 3. Schaffner. D,J,Schroder, W.R.(2010). Food Marketing and International perspectives, web/ Mc Graw Hill Publication.

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Department	Food Science Programme: B.Sc Nutrition and Dietetics										
Semester	Fifth	Course	Catego	ry Code:	DSC *Er	nd Semeste	er Exam Ty	pe: L E			
Course Code	A20NDS505	Perio	ods / W	eek	Credit	Max	kimum Ma	rks			
course code	AZUNDSSUS	L	Т	Р	С	CAM	ESE	T M			
Course Name	INPLANT TRAINING / INTERNSHIP	0	0	4	2	50	50	100			
Prerequisite	Diet Planning, Therapeutic Diet			<u> </u>				<u> </u>			
_	To enable the students to										
Course Objectives	Acquire knowledge about the preparation of diet chart, routine hospital diet.										
	2. Understand the supportive services available in hospital.										
INITEDNICI	IID.										

INTERNSHIP:

Dietary Department: Students are expected to complete 30 days of training at the dietarydepartment including ward visits for case study

Support Services: Students are expected to complete 5 days of observational visits atLaboratory & Blood Bank

SUBMISSION OF CASE REPORT:

It includes (should be submitted to the respective institution)

- Brief description of the Hospital & dietary department (10 pages)
- Short report on the training undergone in Laboratory & Blood Bank(5 pages)
- Case study **ONE** Patient (10 pages)
- Cover to cover 25 pages
- Inclusive of graph, diagrams, pictures etc
- Times New Roman font 1.1/2 spacing, 12 font size
- Soft binding, certified by HOD.

Evaluation Method

Assessment	Continuous A Marks		End Semester Examination (ESE)	Total
Assessment	CAT 1	CAT 2	Marks	Marks
Marks	50	0	50 (presentation – 40, viva -10)	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

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Civth											
JIXIII	Food Science Programme: B.Sc Nutrition and Dietetics ixth Course Category Code: DSC *End Semester Exam Type A20NDT620 Periods / Week Credit Maximum Marks										
A	20NDT620		T					·····			
DIETE	TICS - II	4	T 0	Р 0	C 4	25	ESE 75	TM 100			
<u> </u>											
Nutritio	on and Diseases										
1.	Provide comprehensive know	ledge on role	and ne	ed of di	etician.						
2.	Assess formulate & prepare d	iet for specifi	c condit	tions of	life style dis	order					
3.	Acquire knowledge on nutrition	onal needs of	Diabete	es Melli	tus.						
ļ				r renal	and special o	cases.					
On con	npletion of the course, the stude	ents will be a	ble to				1	apping			
601	Got an idea about the role of d	liotician					····· 				
ļ			city and	lundoni	voight						
			·······								
	, ,					ordors					
		-				Jiueis					
ļ		Support for i	eriai spi	eciai ca			, N	.3			
·					Periods: 12						
<u>i</u>		des, Types, T	reatmer	nt , Com				CO			
ehavio	- Anorexia Nervosa & Bulimia N	ervosa									
Diet i	າ Diabetes Mellitus				Periods: 12	2					
1ellitus	- Aetiology, Types, Clinical Sympt	toms and tre	atment	of Diab	etes Mellitu	s (in brief)					
								COS			
nia and	Ketoacidosis.										
Diet i	n Cardiovascular disease				Periods: 12	2					
ular Dis	eases - Aetiology, Clinical Sympt	oms, Diagnos	sis and 1	Γreatme	ent of			CO			
on, Hyp	erlipidemia, Atherosclerosis, Isc	hemic Heart	Disease	•							
Diet i	n Renal and Specific disease				Periods: 12	2					
<u>.</u>		iagnocic and	Treatmo	ent of G	ilomerulone	phritis. Ne	phrosis.	CO!			
eases -	Aetiology, Clinical Symptoms, D	iagilosis allu	· · · cati	CC O. C		p,	1/	CO:			
	Aetiology, Clinical Symptoms, D e, Chronic Renal Failure. Tutorial Periods: -	Practica				otal Perio		CO			
	1. 2. 3. 4. 5. On con CO1 CO2 CO3 CO4 CO5 The D Definition of the control of the	2. Assess formulate & prepare d 3. Acquire knowledge on nutritional sup 5. Acquire the knowledge on die On completion of the course, the stude CO1 Get an idea about the role of c CO2 Identified the dietary manage CO3 Understand the dietary manage CO4 Understand the role played by CO5 Get acquainted with nutritional The Dietician Definition; Educational Qualification of egistered dietician & Nutritionist, too onts for Registered Dietitian. Diet in Obesity and Underweight Role of Hormones, Assessment and Gradehavior - Anorexia Nervosa & Bulimia N Diet in Diabetes Mellitus Diet in Diabetes Mellitus Diet in Diabetes Mellitus Diet in Cardiovascular disease	1. Provide comprehensive knowledge on role 2. Assess formulate & prepare diet for specifi 3. Acquire knowledge on nutritional needs of 4. Determine the nutritional support for Card 5. Acquire the knowledge on dietary manage On completion of the course, the students will be a CO1 Get an idea about the role of dietician CO2 Identified the dietary management for obe CO3 Understand the dietary management for di CO4 Understand the role played by dietary mean CO5 Get acquainted with nutritional support for management for di CO6 Get acquainted with nutritional support for management for di CO7 Definition; Educational Qualification of Dietician, Types and Segistered dietician & Nutritionist, tools used by contract for Registered Dietitian. Diet in Obesity and Underweight Role of Hormones, Assessment and Grades, Types, Total Contract of Property of the Prope	1. Provide comprehensive knowledge on role and ne 2. Assess formulate & prepare diet for specific condit 3. Acquire knowledge on nutritional needs of Diabete 4. Determine the nutritional support for Cardiac diso 5. Acquire the knowledge on dietary management for On completion of the course, the students will be able to CO1 Get an idea about the role of dietician CO2 Identified the dietary management for obesity and CO3 Understand the dietary management for diabetes of CO4 Understand the role played by dietary measures to CO5 Get acquainted with nutritional support for renal sp The Dietician Definition; Educational Qualification of Dietician, Types and egistered dietician & Nutritionist, tools used by dietician nuts for Registered Dietitian. Diet in Obesity and Underweight Role of Hormones, Assessment and Grades, Types, Treatment enhancement of the played	1. Provide comprehensive knowledge on role and need of di 2. Assess formulate & prepare diet for specific conditions of 3. Acquire knowledge on nutritional needs of Diabetes Melli 4. Determine the nutritional support for Cardiac disorders. 5. Acquire the knowledge on dietary management for renal On completion of the course, the students will be able to CO1 Get an idea about the role of dietician CO2 Identified the dietary management for obesity andunderw CO3 Understand the dietary management for diabetes mellitus CO4 Understand the role played by dietary measures to recove CO5 Get acquainted with nutritional support for renal special can The Dietician Definition; Educational Qualification of Dietician, Types and Role of egistered dietician & Nutritionist, tools used by dietician. Indian nots for Registered Dietitian. Diet in Obesity and Underweight Role of Hormones, Assessment and Grades, Types, Treatment, Compehavior - Anorexia Nervosa & Bulimia Nervosa Diet in Diabetes Mellitus Diet in Diabetes Mellitus Diet in Cardiovascular disease	1. Provide comprehensive knowledge on role and need of dietician. 2. Assess formulate & prepare diet for specific conditions of life style dis 3. Acquire knowledge on nutritional needs of Diabetes Mellitus. 4. Determine the nutritional support for Cardiac disorders. 5. Acquire the knowledge on dietary management for renal and special of the course, the students will be able to CO1 Get an idea about the role of dietician CO2 Identified the dietary management for obesity andunderweight. CO3 Understand the dietary management for diabetes mellitus CO4 Understand the role played by dietary measures to recover cardiacdisc of Get acquainted with nutritional support for renal special case patients. The Dietician Periods: 12 Definition; Educational Qualification of Dietician, Types and Role of dietician, egistered dietician & Nutritionist, tools used by dietician. Indian Dietetic Ants for Registered Dietitian. Diet in Obesity and Underweight Periods: 12 Role of Hormones, Assessment and Grades, Types, Treatment, Complications and Pehavior - Anorexia Nervosa & Bulimia Nervosa Diet in Diabetes Mellitus Periods: 12 Diet in Diabetes Mellitus Periods: 12 Diet in Diabetes Mellitus Periods: 13 Diet in Cardiovascular disease Periods: 13 Diet in Cardiovascular disease Periods: 13	1. Provide comprehensive knowledge on role and need of dietician. 2. Assess formulate & prepare diet for specific conditions of life style disorder 3. Acquire knowledge on nutritional needs of Diabetes Mellitus. 4. Determine the nutritional support for Cardiac disorders. 5. Acquire the knowledge on dietary management for renal and special cases. On completion of the course, the students will be able to CO1 Get an idea about the role of dietician CO2 Identified the dietary management for obesity andunderweight. CO3 Understand the dietary management for diabetes mellitus CO4 Understand the role played by dietary measures to recover cardiacdisorders CO5 Get acquainted with nutritional support for renal special case patients. The Dietician Periods: 12 Definition; Educational Qualification of Dietician, Types and Role of dietician, Difference egistered dietician & Nutritionist, tools used by dietician. Indian Dietetic Association ints for Registered Dietitian. Diet in Obesity and Underweight Periods: 12 Role of Hormones, Assessment and Grades, Types, Treatment, Complications and Behavior - Anorexia Nervosa & Bulimia Nervosa Diet in Diabetes Mellitus Periods: 12 Rellitus - Aetiology, Types, Clinical Symptoms and treatment of Diabetes Mellitus (in brief) complications — Cataract and Retinopathy, Neuropathy, Nephropathy, Diabetic Comania and Ketoacidosis. Diet in Cardiovascular disease Periods: 12	1. Provide comprehensive knowledge on role and need of dietician. 2. Assess formulate & prepare diet for specific conditions of life style disorder 3. Acquire knowledge on nutritional needs of Diabetes Mellitus. 4. Determine the nutritional support for Cardiac disorders. 5. Acquire the knowledge on dietary management for renal and special cases. On completion of the course, the students will be able to BT Ma (Highes CO1 Get an idea about the role of dietician CO2 Identified the dietary management for obesity andunderweight. KCO3 Understand the dietary management for diabetes mellitus CO4 Understand the role played by dietary measures to recover cardiacdisorders KCO5 Get acquainted with nutritional support for renal special case patients. The Dietician Periods: 12 Definition; Educational Qualification of Dietician, Types and Role of dietician, Difference egistered dietician & Nutritionist, tools used by dietician. Indian Dietetic Association, ints for Registered Dietitian. Diet in Obesity and Underweight Role of Hormones, Assessment and Grades, Types, Treatment, Complications and ehavior - Anorexia Nervosa & Bulimia Nervosa Diet in Diabetes Mellitus Periods: 12 Rellitus - Aetiology, Types, Clinical Symptoms and treatment of Diabetes Mellitus (in brief). In proposition of the Coma, mia and Ketoacidosis. Diet in Cardiovascular disease Periods: 12			

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- 2. Srilakshmi. B, Dietetics, New age international (Pvt Ltd.,) 2000
- 3. Subhangini. A. Joshi, Textbook of Nutrition and Dietetics, Tata Mc Graw hill publishinglimited, 1992

Reference Books

- 1. Dietary Guidelines for Indians, ICMR, National Institute of Nutrition, Hyderabad, 2011.
- 2. Gordon M. Wardlaw, Paul M.Insel, Perspectives in nutrition 11th edition, Mosby- year Book,Inc.St.Louis,Missouri, 2019
- 3. Cornne H. Robinson Marilyn R. Lawler, Normal and Therapeutic Nutrition, Mac MillanPublishing Company, New York, 1986.
- 4. F.P. Antia, Clinical Dietetics and Nutrition, Oxford University press, 1989.
- 5. Krause, M.V. and Hunesher, M.A., Food, Nutrition and Diet Therapy, 14th Edition, W.B. Saunders Company, Philadelphia, London, 2016.

Web References

https://health.clevelandclinic.org/metabolic-syndrome-diet/
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1783583/ https://www.sanitarium.com.au/health-nutrition/nutrition/foods-that-fight-lifestyle-diseases https://www.un.org/en/chronicle/article/lifestyle-diseases-economic-burden-health-services

* TE – Theory Exam, LE – Lab Exam

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Department	Food Science	Prograr	nme: B .	Sc Nutr	ition and Di	etetics							
Semester	Sixth	Periods / Week Credit Maximum Marks											
Course Code	A20NDT621	Perio	ods / W	7		·····		······· '					
		L	T	P	С	CAM	ESE	TM					
Course Name	SPORTS NUTRITION	4	0	0	4	25	75	100					
Prerequisite	Nutrition for Sports Person					<u> </u>							
······································	1. Develop an understanding t	the concept of	Sports	Nutritio	on								
Course	2. Obtain an insight about the	physiology of e	exercise	•									
Objectives	3. Understand the role played	by the macro r	nutrient	S									
	4. Understand the importance	of water and e	electroly	/tes.									
	5. Know the nutritional suppor	t for sports pe	rson.										
	On completion of the course, the stu	dents will be a	ble to					lapping					
								st Level)					
Course	CO1 Get an idea about the conce	•						K2					
Outcome	CO2 Acquaint the knowledge of e	xercise physio	logy					К3					
	CO3 Understand the role of macro	nutrients.						K2					
	CO4 Understand the importance	of water and e	lectroly	tes				К3					
	CO5 Get acquainted with nutritiona	al support for s	ports pe	erson				K4					
UNIT-I	Introduction to Sports Nutrition				Periods: 1	2							
Introducti	on to Sports Nutrition- Definition - Scop	oe - Importance	e of Spo	rts Nuti	rition								
Physical F	itness - Types of Fitness - Components	of Physical Fitr	ness – N	1ethods	and Benefi	ts,		CO1					
Exercise -	Types and Factors affecting - Exercises	to strengthen	differen	t parts	of the body								
UNIT-II	Physiology of Exercise, Bioenergetic	s and Metabo	lic Resp	onses	Periods: 1	2							
Physiology	of Exercise - Fuels for Exercise - Carbo	ohydrates -Fat	s - Prote	eins - Hi	igh-Energy F	hosphates	5,	CO2					
, .	, tics - Anaerobic ATP Production - A	•				•							
_	ents at Rest - Rest-to-Exercise Transition						•						
•	Responses to Exercise: Biomechanics	•				•							
	Training - Cardio-Pulmonary adapta		•										
Pulmonar													
UNIT-III	Nutritional Recommendations				Periods: 1	2							
Carbobyd	rates, Proteins and Fats in sports: - dur	ing training d	urina di	fforont	nhacoc of D	ronaration							
•	•	.	•		•	•	•	CO3					
•	reparatory phase, Specific preparatory				•	iase, injur	У						
	ilitation phase - Pre competition nutrit	ion - Post com	ipetitioi	n nutriti									
UNIT-IV	Hydration and Electrolytes				Periods: 1	2		604					
Hydration	- Pre competition Hydration, The Wee	k before, the d	ay befo	re, on t	he day. Elec	trolytes -		CO4					
Role of e	lectrolytes in Muscular contraction- E	Electrolyte loss	s & exe	ercise -l	Maintaining	/							
Restoring	electrolyte Balance - Sports & Energy	drinks - Osmol	ality & d	osmolar	ity - Hypoto	nic,							
Isotonic, F	Hypertonic - Acclimatization - Non Alco	holic Beverage	es .										
UNIT-V	Food Supplements				Periods: 1	2							

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Ergogenic Aids and Supplements - Sports Foods - Cereal Bar, Sports Drinks, Carbohydrate Gels, Liquid Meal Replacements, Use of Performance Enhancing Substances among Athletes

- Anabolic Steroids, Types of Protein Supplements - Creatinine, Beta- Alanine, Glutamine, Branched Chain Amino Acids, Beta Hydroxyl Beta Methyl Butyrate(HMB), Whey Proteins, Caffeine, Glycerol, Bicarbonate, Citrate, World Anti- doping Agency (WADA) - Anti Doping Rules and Regulations.

CO5

Lecture Periods: 60	Tutorial Periods:	Practical Periods: -	Total Periods: 60	
Text Books				

- 1. Mcardle W. D. (2018). Sports and Exercise Nutrition, 5th Edition, Lippincott Williams and Wilkins, North America.
- 2. Burke L. (Author), Deakin V. (2015). Clinical Sports Nutrition. McGraw Hill, Australia.

Reference Books

- 1. Melvin H.Williams, Nutrition for Health, Fitness and Sports, 7th edition, McGraw Hill International Edition, 2005
- 2. Micheal J.Gibney, Ian A Macdonald and Helen M.Roche, Nutrition and Metabolism, Blackwell Publishing Company, Bangalore, Reprint 2004.
- 3. Mc Ardle Katch & Katch, Nutrition, Health & Fitness, Williams & Wilkins, A.Waverly Company
- 4. Srilakshmi. B, Suganthi. V, Ashok, K.C, Exercise Physiology, Fitness and Sports Nutrition, New Age International, New Delhi, 2017.

Web References

https://www.physio-pedia.com/Sports_Nutrition

https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3805623/

https://www.nutrition.gov/topics/basic-nutrition/eating-exercise-and-sports

* TE – Theory Exam, LE – Lab Exam





Lecture Periods	. CO Tutori	al Periods: -	Practica	al Daria	dc	-	Total Perio	dc. EU	
requireme	oonse, Hormonal Respornts, Protein requirements (brief explanation).			_					
Introduction	on, Definition - Critically	ill patient, Nut	ritional Chan	ges dur	ring crit	ical illness	- Acute		CO5
	ntation of Macro nutrien Nutrition support for	ts and Micro nu	trients such a			_	ntioxidant		
Pharmaco	nutrition – an evalu	ation of the	specific iss	ues si	ırround	ling - sele	ection an	d	CO4
UNIT-IV	Pharmaconutrition					Periods: 1	2		i
	Nutrition — Indications Complications	, Monitoring - <i>i</i>	amınıstratio	on – Ty	pes of	intusion, TF	'N		CO3
	.i.					<u> </u>			
	ny - Types of food - Infus Parenteral Nutrition	-				Periods: 1			
	trition – Indications, M	onitoring Ada	ninistration	and Mar	thods	<u> </u>		······································	CO2
Nutritional I UNIT-II	Monitoring and Evaluation	on – Definition, (Lomponents,	Object	ives, an	d Evaluation Periods: 1		ition care	
	ssessment - Nutritional I			•		d Evoluati	n of	ition	CO1
	on to Nutrition Care Pro		•		•	rocess,			CO4
UNIT-I	Concept of Nutrition (Periods: 1	2		
	CO5 Get acquainted v	with nutritional	support for I	CU patie	ents			ŀ	(3
	CO4 Understand th	e importance of	Pharmaconu	utrition				ŀ	〈 3
	CO3 Understand th	e infusion techn	iques of pare	enteraln	utrition)		ŀ	(3
Outcome	CO2 Acquaint the k	knowledge of en	teral nutritio	n.				ŀ	(3
Course	CO1 Get an idea ab	out the concept	of nutrition	alcare					(3
		, otadi							st Level
	On completion of the c							BT M	apping
	4. Understand the 5. Know the nutrit								
	3. Obtain an insigh								
Course Objectives	2. Obtain an insigh				ing pro	cedures.			
C	1. Develop an und	erstanding the c	oncept of nu	tritiona	l care.				
Prerequisite	Nutritional Care		<u>i</u>	<u>i</u>	<u>i</u>	<u>i</u>	<u>i</u>	<u> </u>	<u>i</u>
			-			-			
Course Name	NUTRITION IN CRITICA	AI CARF	4	T 0	P 0	C 4	CAM 25	ESE 75	TM 100
Course Code	A20NDT622			ods / W	T	Credit	·····-	ximum M	······
ocineste.	Sixth		 		ry Code		nd Semest		
Semester				/ atame	~ / / ~ ~ ~	· 11C/	nd	~r Ev~~~ T	ひんし エピ

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Text Books

- 1. Rajkumar .R & Vinod . B Patel, Diet and Nutrition in Ctitical Care. Living ReferenceWork (2020).
- 2. Cynober . L& Moore . F.A., Nutrition in Critical Care. Nestle Nutrition InstituteWorkshop: Vol8 (2013).
- 3. Subhal . D, Principles in Critical Care Nutrition. Jaypee BrothersMedical Publications(2019).

Web References

http://www.criticalcarenutrition.com

Nutrition therapy in critical illness: a review of the literature for clinicians | Critical Care

| Full Text (biomedcentral.com)

https://www.sciencedirect.com/science/article/abs/pii/S0261561415001

* TE – Theory Exam, LE – Lab Exam

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Department	Food	Science	Progran	nme: B.	Sc Nutr	ition and Di	etetics		
Semester	Sixth		Course	Catego	ry Code:	: DSE *Er	nd Semeste	r Exam ⁻	Гуре: ТЕ
Course Code	Δ20N	IDE609	Perio	ds / W	eek	Credit	Max	imum N	larks
	AZON		L	Т	Р	С	CAM	ESE	TM
Course Name	HEAL	TH PSYCHOLOGY	3	0	0	3	25	75	100
	*								
Prerequisite	·····÷······	th and Psychology							
Cauraa	1.	To understand the psychological			contribu	iting to heal	th issues.		
Course Objectives	2.	To identify the problematic hea							
Objectives	3.	To organize various factors influ							
	4.	To learn coping strategies for h	ealth issues	and rea	lize the	role of posi	tive emotio	ns in he	alth
		psychology	•						
	·····	To describe the various prevent			iess and	l various stra	ategies of e	··•	
	On cor	mpletion of the course, the stude	ents will be a	ble to				1	lapping
C			ما ده داه ما		٠ ما : عم		.h :	•	est Level
Course								K2	
Outcome	Realize different problematic fleatin behaviors								K3
	CO3	Organize various factors influen	cing the prac	tice of	health b	ehavior			К3
	CO4	Implement coping strategies an	d assimilate _l	oositive	emotio	ns to overc	ome health	l	К3
		problems							
	CO5	Describe the various preventive	measures fo	r illness	and va	rious strate	gies of		К3
		enhancing health							
UNIT-I	Intro	duction to Health Psychology				Periods: 0	9		
Definit	ion - Me	eaning of Health Psychology – Hea	alth beliefs, C	Cognitiv	e – beha	avioral appr	oaches,		
health	illness a	and mind-body continuum - Bio-P	sychosocial n	nodel o	f health	and its imp	lications.		CO1
UNIT-II	Mode	els of Health Behavior				Periods: 0	9		
Health	behavio	or – Types and Characteristics – Fa	actors influer	ncing he	ealth be	havior and			CO2
		llth behavior – Theories of Health		_			odification.		
UNIT-III	Enha	ncing Health Behavior				Periods: 0	9		
Import	ance of	health enhancing behavior - Role	of exercise,	Yoga, H	lealthy o	diet, Weight			
manag	ement a	and Sleep - Psychology of Pain ma	nagement, it	s theor	ies and	pain manag	ement		CO3
technic	ques.		-						
UNIT-IV	Stres	s and Coping				Periods: 0	9		
Stress:	definiti	on, dimensions of stress- sources	of chronic st	ress- Th	neoretic	al contribut	ions:		CO4
Lazaru	s's Appr	aisal Model, Flight or fight respor	nse, General a	adaptat	ion Syn	drome- Ten	ding		
and Be	friendin	g Model- Coping strategies and t	he role of po	sitive er	motions	in well beir	ng.		
UNIT-V	T	:h Care System				Periods: 0			

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Indian Scenario, Attitude of Health Professionals, Burnout in health
professionals, Designing health care work environment, Future challenges for health care,
Growth of Health Psychology.

CO5

Lecture Periods: 45 Tutorial Periods: Practical Periods: - Total Periods: 45

Text Books

- 1. Allen, F. (2011). Health psychology and behavior. Tata McGraw Hill Edition.
- 2. Marks, D. F., Murray, M., Evans, B., &Estacio, E.V. (2006). Health Psychology. India: Sage Publications.
- 3. Sarafino, E. P. (1999). Health Psychology. John Wiley & Sons Inc.

Reference Books

- 1. Boyer, B., & Paharia, I. (2008). Comprehensive Handbook of Clinical Health Psychology. Edison, NJ: John Wiley &Sons.
- 2. Branmon, L., & Frist, J. (2010). Introduction to Health Psychology; New Delhi, India: Cengage Learning India Pvt Ltd.
- 3. Friedman, H.S. (2011) .Oxford Handbook of Health Psychology. Oxford:OU
- 4. Marks, D., Murray, M., Evans, B., Willig, C., Woodall, C., & Sykes, C.M. (2008). Health Psychology: Theory, research and practice (2nd Ed.). New Delhi, India: Sage Publications.

Web References

https://www.apa.org/education-career/guide/subfields/health#:~:text=Health%20psychology%20focuses%20on%20how,or%20change%20poor%20health%20habits.

* TE - Theory Exam, LE - Lab Exam

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Department	-	Science	······			ition and D							
Semester	Sixth				ry Code		nd Semest						
Course Code	A20N	20NDS606 Periods / Week Credit Maximum Marks											
Course Name	1	CS IN RESEARCH	2	0	О	2	100	0	100				
Prerequisite	Nutriti	on and Research Methods											
		Basic knowledge on the role and	importance	of rese	arch in	science.							
Course	2.	Analyze research reviews identi	•										
Objectives	3.	Identify the research design and											
	4.	Know about the processing of d	ata.										
	5.	Develop a research proposal or	industry pro	ject pla	n.			_					
	On cor	mpletion of the course, the stude	nts will be a	ble to				1	apping st Level				
Course	CO1	Get an idea about the meaning	g of research	and in	science			ŀ	(3				
Outcome	CO2	Acquaint the knowledge of rev	iew of litera	ture				ŀ	(3				
	CO3	Understand the types of sampl	e design and	d datacc	llection	1		ŀ	(3				
	CO4	Understand the importance of p	rocessing th	e data				ŀ	(3				
	CO5	Get acquainted knowledge abou	t the layout	of the re	esearch	report		ŀ	(3				
UNIT-I	Resea	arch Methodology – Introduction				Periods: 0	6						
	ce, Rese	ng, Definition, Characteristics, Obarch and Scientific Method, Criter	•		•				CO1				
UNIT-II	Revie	ew of Literature				Periods: 0	6						
		 Definition, Purpose and Importa Exploratory, Diagnostic, Descript 		ch Desi	gn - Def	inition, Cor	ıcept- Vari	ables and	CO2				
UNIT-III	· • • •	oling Methods				Periods: 0	6		I				
•	esign- D	refinition and Types - Systematic, s rpes - Observation and Interview	•			•			CO3				
UNIT-IV		essing and Analysis of Data				Periods: 0							
Processin	g of Dat ndency-	a - Editing, Coding, Classification Mode, Median and Mean. Mea				of Data - N	neasures o		CO4				
UNIT-V	Resea	arch Report				Periods: 0	6		I				
•		earch Report - Preliminary Page, presentations.	Main Text a	nd End	Matter	. Hands on	training o	n	CO5				
Lecture Period	•	Tutorial Periods: -	Practic	al Perio	ds: -	-	Total Perio	ds: 30					
Text Books	J. 30	ratoriai i Cilous.	i ractic	a C. 10			Starr Cilo						
1. Kothar Edition, N	ew Age	2004), Research Methodology, M International Publishers, New Del (2011), Research Methodology: a	hi.					SAGE					





Publications, New Delhi.

3. Beverley Moriarty, (2018), Research Skills for Teachers – From Research QuestiontoResearch Design, Allen & Unwin Publishers, Australia.

Reference Books

- 1. Rajendra Kumar, C. (2008), Research Methodology, APH Publishing Corporation, NewDelhi.
- 2. Pagadala Suganda Devi (2017), Research Methodology: A Handbook for Beginners, Notion Press, Chennai.
- 3. Vijayalakshmi Ponnuraj and Sivaprakasam, C. (2008), Research Methods: Tips and Techniques, MJP Publishers.

Web References

https://www.indeed.com/career-advice/career-development/research-methodology/ttps://www.educba.com/types-of-research-methodology/https://ccsuniversity.ac.in/bridge-library/pdf/MPhil%20Stats%20Research%20Methodology-Part1.pdf

* TE – Theory Exam, LE – Lab Exam

T dovid

Department	Food	Science	ience Programme: B.Sc Nutrition and Dietetics									
Semester	Sixth		Course	Categor	y Code:	DSC *E	nd Semest	er Exam ⁻	Гуре: L E			
Course Code	A 20	NDL623	Perio	Periods / Week Cre				ximum M	larks			
Course Coue	AZU	NDL023	L	Т	Р	С	CAM	ESE	TM			
Course Name	DIET	ETICS – II PRACTICAL	0	0	4	2	50	50	100			
Prerequisite	Diet P	lanning, Therapeutic Diet										
	To en	able the students to										
Course Objectives		 Provide comprehensive Acquire knowledge on one 		•	•		•	c diets.				
	On co	mpletion of the course, the st	udents will be a	ble to				1	apping st Level)			
Course Outcome	CO1 Understand the basic principles involved in planning diets for different disease conditions. K3											
	CO2	Plan and prepare diets to m specific disease conditions	neet out the qua	llity and	quantit	y requiren	nents for		К3			
	CO3	CO3 Acquire practical knowledge of therapeutic diet to meet the requirement										
Experiments		Practicals - 30 hrs										

Planning and Preparation of diet in:

- 1. Obesity and Underweight
- 2. Diabetes Mellitus
- 3. Cardiovascular Disease Hypertension, CHD
- 4. Renal Disorders Glomerulonephritis, Nephrotic Syndrome
- 5. Acute Renal Failure and Chronic Renal Failure.

Text Books

- 1. Srilakshmi, B., Nutrition Science, New Age International (P) Ltd., New Delhi, 2017.
- 2. Mahtab, S, Bamji, Kamala Krishnasamy, G.N.V. Brahmam, Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi, 2015
- 3. Swaminathan, M., Advanced Textbook on Food and Nutrition, Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore, 2015.

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Department	Food Science Programme: B.Sc Nutrition and Dietetics										
Semester	Sixth	Course	Catego	ry Code:	DSC *E	nd Semesto	er Exam T	ype: L E			
Course Code	A20NDP601	Perio	ods / W	eek	Credit	Max	ximum Ma	arks			
course code	AZUNDFOUI	L	Т	Р	С	CAM	ESE	TM			
Course Name	PROJECT	0	0	10	5	40	60	100			
Prerequisite	Diet Planning, Therapeutic Die	et .		<u> </u>							
	To enable the students										
Course Objectives	To gather the information regarding the novel recipes and diet therapies from various literature review.										
	To develop innovative ideas in new food products										
	To encourage the students to promote diet counseling techniques to prevent various diseases.										
	To train the students for the p	reparation of project r	eports.								
	To train the students to defen	d reviews and viva voc	e exam	ination.							
Course	CO1 - Identify the problem sta	itement for the propos	ed wor	k throug	h the litera	ture surve	у.				
outcomes	CO2 – Understand the process of developing new food products.										
	CO3 - Apply the acquainted skills to counsel the various diseases.										
	CO4 - Estimate, plan and execute the project.										
	CO5 - Defend the finding and	conclude with oral/wri	tten rep	oorts.							

Course Description:

- A Project topic must be selected either from published lists or the students themselves may propose suitable topics in consultation with their guides.
- The aim of the project work is to prepare novel recipes by incorporating the phytonutrients/ functional foods, evaluating the dietary practices for various diseases.
- The progress of the project is evaluated based on a minimum of three reviews.
- The review committee may be constituted by the Head of the Department.
- The End Semester Examination for the project work shall consist of an evaluation of the final project report by an external examiner, followed by a viva-voce examination.

Evaluation Method

	Continuo	us Assessme	nt Marks (CAM)	End Semester Examination	Total
Assessment	Review 1	Review 2	Review 3	(ESE) Marks	Marks
		40		60	
Marks	(roviou 1	. •	10, review 3 - 20)	(outcome – 10, presentation –	100
	(review I –	To, review –	10, Teview 5 - 20)	20, viva – 20, report – 10)	

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

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SRI MANAKULA VINAYAGAR ENGINEERING COLLEGE
(An Autonomous Institution)
(Approved by AICTE, New Delhi & Affiliated to Pondicherry University)
(Accredited by NBA-AICTE, New Delhi, ISO 9001:2000 Certified Institution & Accredited by NAAC with "A" Grade)

Madagadipet, Puducherry - 605 107



Department of Food Science

B.Sc. Nutrition and Dietetics

ANNEXURE –II (Curriculum Structure & Syllabi – I sem)

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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		\$	SEMESTER - I							
SI.	Course	Course Title	Category	Р	erio	ds	One dite		Max.Ma	arks
No	Code	Course Title	Category	L	T	Р	Credits	CAM	ESM	Total
Theo	ory		•							
1	A23TAT101C / A23FRT101C	Tamil – I /French -I	MIL	3	0	0	3	25	75	100
2	A23GET101C	General English – I	ENG	3	0	0	3	25	75	100
3	A23NDT101D	Nutrition Science – I	DSC	4	0	0	4	25	75	100
4	A23NDT102D	Food Science	DSC	4	0	0	4	25	75	100
5	A23CHD102D	Basic Chemistry for Food Science	IDC	4	0	0	4	25	75	100
Prac	tical		•		· ·			•	•	•
6	A23NDL101D	Food Science Practical	DSC	0	0	4	2	50	50	100
7	A23CHI102D	Basic Chemistry for Food Science Practical	IDC	0	0	4	2	50	50	100
Skill	Enhancement Cou	irse	<u> </u>					1		I.
8	A23ENSA02C	Soft Skills	SEC	2	0	0	2	100	0	100
Abili	ty Enhancement C	ourse	"				l	1	l	I.
9	A23AETA01C	Public Administration	AEC	2	0	0	1	100	0	100
Emp	loyment Enhancen	nent Course								
10	A23NDC101D	Certification Course	EEC	0	0	4	0	100	0	100
	1	1	ı			1	25	525	475	1000

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		SEME	STER-II							
SI	Course	Course Title			Per	iods			Max.M	arks
No	Code	Course Title	Category	L	T	Р	Credits	CAM	ESM	Total
Theo	ry									
	A23GET202C/	Tamil – II /French -II								
1	A23FRT202C		MIL	3	0	0	3	25	75	100
2	A23GET202C	General English-II	ENG	3	0	0	3	25	75	100
3	A23NDT203D	Nutrition Science – II	DSC	4	0	0	4	25	75	100
4	A23NDT204D	Human Physiology	DSC	4	0	0	4	25	75	100
5	A23CPDA01C	Computer Basics	IDC	4	0	0	4	25	75	100
Pract	ical									
6	A23NDL202D	Nutrition Science Practical	DSC	0	0	4	2	50	50	100
7	A23NDL203D	Human Physiology Practical	DSC	0	0	4	2	50	50	100
Skill	Enhancement Cou	irse								
8	A23ENSA01C	Communication Skills	SEC	2	0	0	2	100	0	100
Abilit	y Enhancement C	ourse								
9	A23AETA02C	Environmental Studies	AEC	2	0	0	1	100	0	100
Empl	oyment Enhancen	nent Course								
10	A23NDC202D	Certification Course	EEC	0	0	4	0	100	0	100
Exter	sion Activities									
11	A23EAS201C	National Service Scheme	EA	0	0	2	0	100	0	100
				ı			25	625	475	1100

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		SEMEST	TER – III							
S.	Course			Periods				Max. Marks		
No	Code	Course Title	Category	L	T	Р	Credits	CAM	ESM	Total
Theor	у									
1	A23NDT305D	Nutritional Biochemistry	DSC	4	0	0	4	25	75	100
2	A23NDT306D	Food Microbiology	DSC	4	0	0	4	25	75	100
3	A23NDE30XD	DSE – 1**	DSE	3	0	0	3	25	75	100
4	A23NDD301C	Food Analysis and quality control	IDC	3	1	0	4	25	75	100
5	A23XXOXXX	Open Elective–1**	OE	2	0	0	2	25	75	100
Practi	cal		<u> </u>				<u> </u>			
6	A23NDL304D	Nutritional biochemistry Practical	DSC	0	0	4	2	50	50	100
7	A23NDI301C	Food Analysis Practical	IDC	0	0	4	2	50	50	100
Skill E	nhancement Cou	ırse								
8	A23MASA01C	Quantitative Aptitude and Logical Reasoning	SEC	2	0	0	2	100	0	100
Ability	/ Enhancement C	Course								
9	A23AETA03C	Indian Constitution	AEC	2	0	0	1	100	0	100
Emplo	yment Enhancer	ment Course								
10	A23NDC303D	Certification Course	EEC	0	0	4	0	100	0	100
							24	525	475	1000

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		SEMES	STER-IV							
S.		O	0-1	Р	eric	ods	0		Max.N	/larks
No	Course Code	Course Title	Category	L	T	Р	Credits	CAM	ESM	Total
Theor	у									
1	A23NDT407D	Nutrition Through life cycle	DSC	4	0	0	4	25	75	100
2	A23NDT408D	Functional foods and nutrigenomics	DSC	3	0	0	4	25	75	100
3	A23NDE40XD	DSE – II*	DSE	3	0	0	3	25	75	100
4	A23MAD411C	Biostatistics	IDC	3	1	0	4	25	75	100
5	A23XXOXXX	Open Elective	OE	2	0	0	2	25	75	100
Practi	cal									
6	A23NDL405D	Nutrition Through Life Cycle Practical	DSC	0	0	4	2	50	50	100
7	A23NDL406D	Functional Foods Practical	DSC	0	0	4	2	50	50	100
Inter	nship									
8	A23NDN401D	Internship / Inplant Training	DSC	0	0	4	3	50	50	100
Skill E	nhancement Co	urse								
9	A23NDS401D	Bakery and Confectionery	SEC	0	0	4	2	100	0	100
Abili	ty Enhancement	Course				-				
10	A23AETA04C	Value Education	AEC	2	0	0	1	100	0	100
Emplo	yment Enhance	ment Course								
11	A23NDC404D	Certification Course	EEC	0	0	4	0	100	0	100
							27	575	525	1100

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	SEMESTER -V													
S.	Course			Р	erio	ods			Max.M	arks				
No	Code	Course Title	Category	L	T	Р	Credits	CAM	ESM	Total				
Theor	у													
1	A23NDT509D	Dietetics I	DSC	4	0	0	4	25	75	100				
2	A23NDT510D	Public Health Nutrition	DSC	4	0	0	4	25	75	100				
3	A23NDT511D	Food Product Development and Marketing	DSC	4	0	0	4	25	75	100				
4	A23NDE50XD	DSE – III*	DSE	3	0	0	3	25	75	100				
Practi	cal													
5	A23NDL507D	Dietetics I Practical	DSC	0	0	4	2	50	50	100				
6	A23NDL508D	Food Product Development	DSC	0	0	4	2	50	50	100				
Skill E	nhancement Cou	ırse												
7	A23NDS502D	Basics in Research Methodology	SEC	2	0	0	2	100	0	100				
Onlin	e Course													
8	A23NDM501D	Online Course	occ	0	0	2	0	100	0	100				
							21	400	400	800				

		SEMES [*]	TER-VI							
S.	Course	O T'41	0-1	Р	eric	ods	6 II.		Max.M	arks
No	Code	Course Title	Category	L	Т	Р	Credits	CAM	ESM	Total
Theor	у									
1	1 A23NDT612D Dietetics II		DSC	4	0	0	4	25	75	100
2	A23NDT613D	Sports Nutrition	DSC	4	0	0	4	25	75	100
3	A23NDE60XD	DSE – III*	DSE	3	0	0	3	25	75	100
Practi	cal									
4	A23NDL609D	Dietetics II Practical	DSC	0	0	4	2	50	50	100
5	A23NDL610D	Sports Nutrition Practical	DSC	0	0	4	2	50	50	100
Projec	ct		1							
6	A23NDP601D	Project	DSC	0	0	10	5	40	60	100
Skill E	Skill Enhancement Course									
7	A23NDS603D	Dietetic Techniques and Patient Counselling	SEC	0	0	4	2	100	0	100
							22	315	385	700

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B.Sc. Nutrition and Dietetics STRUCTURE FOR UNDERGRADUATE PROGRAMME

SI. No	Course Category	Breakdown of Credits
1	Modern Indian Language (MIL)	6
2	English (ENG)	6
3	Discipline Specific Core Courses (DSC)	72
4	Discipline Specific Elective Courses (DSE)	12
5	Inter-Disciplinary Courses (IDC)	20
6	Skill Enhancement Courses (SEC)	12
7	Employability Enhancement Courses (EEC*)	
8	Ability Enhancement Courses (AEC)	4
9	Open Elective (OE)	4
10	Internship / In-Plant Training	3
11	Project	5
10	Extension Activity (EA)	
	Total	144

SCHEME OF CREDIT DISTRIBUTION - SUMMARY

SI.No	Course Category		Credi	er	Total Credits			
	,	ı	II	Ш	IV	٧	VI	
1	Modern Indian Language (MIL)	3	3	-	-	-	-	6
2	English (ENG)	3	3	-	-	-	-	6
3	Discipline Specific Core Courses (DSC)	10	12	10	12	16	12	72
4	Discipline Specific Elective Courses	-	-	3	3	3	3	12
5	Inter-Disciplinary courses (IDC)	6	4	6	4	-	-	20
6	Skill Enhancement Courses (SEC)	2	2	2	2	2	2	12
7	Employability Enhancement Courses	-	-	-	-	-	-	-
8	Ability Enhancement Courses (AEC)	1	1	1	1	-	-	4
9	Open Elective (OE)	-	-	2	2	-	-	4
10	Internship / In-Plant Training	-	-	-	3	-	-	3
11	Project	-	-	-	-	-	5	5
10	Extension Activity (EA)	-	-	-	-	-	-	-
	Total	25	25	24	27	21	22	144

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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PROGRAMME EDUCATION OBJECTIVE (PEO):

Nutrition and Dietetics graduates will be able to:

- PEO1 Perform well in applied nutrition fields including public health nutrition and therapeutic diet.
- PEO2 Serve in the core health care system, which leverages diverse nutrition and dietetics domains including clinical nutrition, diet therapy, critical care, health and fitness centres.
- PEO3 Contribute to the skilled manpower requirement in this field so as to address societal & national needs.

PROGRAM OUTCOME (PO):

After the successful completion of the program, the students are expected to

- PO1 Apply the knowledge of biological sciences as a basis for understanding the role of food and nutrition, therapeutic nutrition in health and diseases.
- PO2 Apply ethical principles and commit to professional ethics and responsibilities and norms of the nutrition and health care practice.
- PO3 Understand the impact of nutrition and diet therapy in societal and environmental contexts, and demonstrate the knowledge and need for sustainable development.
- PO4 Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.
- PO5 Design solutions for health and nutritional problems and design products that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.

PROGRAM SPECIFIC OBJECTIVE

- **PSO1:** Comprehend the association between nutrients with physiology, diseases and dietary solutions.
- **PSO2:** Apply knowledge and technical skills in assessing, evaluating and providing health care solutions for individuals and communities.
- **PSO3:** Associate the theoretical knowledge and skills acquired to the food industry .and health centres

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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CourseCode	ment	Tamil		Progran	nme: B.	Sc Nutr	ition and Di	etetics				
Course Name	Semester	First							er Exam Ty	pe: TE		
Course Name	CourcoCodo	Δ23T	AT101C	·····			·					
Common to B.A., B.Sc., BBA., B.COM., BCA., B.COM CS) Prerequisite On completion of the course, the students will be able to BT Mapping (Highest Level (Hi	CourseCode	ALUIT		L	Т	Р	С	CAM	ESE	TM		
On completion of the course, the students will be able to	Course Name	GENE	RAL TAMIL – I	3	0	0	3	25	75	100		
On completion of the course, the students will be able to Outcome CO1 yf.fpaq.fs; człljik; tho;tpay; newpKiwfis; Ngzpelj.jy; K3 CO2 ekt vzz.jiji ntspg.gt.jik; fUtpahfj; jhankhopiag; gad.gt.jijy; K3 CO3 jfty; njiHGF.jf; jhankhopapd; ft/paj.jt.jij człly; K3 CO4 jhankhopapd; rpwgig mwply; CO5 yffrad.dgt.gfs EUtj.pmd/fis tsHij.y; K3 JNIT-I yf.ftpa.yf.frad.dgt.gfs EUtj.pmd/fis tsHij.y; K3 JNIT-I yf.ftpa.yf.frad.dgt.gfs EUtj.pmd/fis tsHij.y; K3 JNIT-I yf.ftpa.yf.frad.dgt.gfs EUtj.pmd/fis tsHij.y; JNIT-I yf.ftpa.yf.frad.dgt.gfs EUtj.pmd/fis tsHij.y; JNIT-I yf.ftpa.yf.frad.dgt.gfs EUtj.pmd/fis tsHij.y; JNIT-II ehlfk; -ciueil-ehty; ehlfk; -ciueil-ehty; Periods: 09 shifk; -gpugO.rd; -kl.jil -ciueil -u.h.Ntq;fihryglp -mejf; fhyj.jpy; fhg.gp.y;y-ehty; -u.h.KUfNts; -kpspify; JNIT-III gf.jp.yffpak; -irtk;-jpUObdrdrkg.gih - kly; jpUKw - NjhLilantpad; .ghly; kl_Lk; -jpUehff;furth - ehd;fiks; jpUKw - SwwhapdthW .ghly; dj.p.yffpak; -irtk;-jpUObdrdrkg.gih - kly; jpUKw - NjhLilantpad; .ghly; kl_Lk; -jpUehff;furth - ehd;fiks; jpUKw - SwwhapdthW .ghly; dj.p.yffpak; -irtk;-joUObdrdrkg.gih - kly; jpUKw - NjhLilantpad; .ghly; kl_Lk; -jpUehff;furth - ehd;fiks; jpUKw - SwwhapdthW .ghly; pUkejpuk; - MMFfk; Lkddghly; kl_Lk; - fhluffhyk;klaht-jpUtpublil kzpkhy - mdghy; mltn;thW .ghly; kl_Lk; - lpublik; - ekkhonth - latk; pUthalpop- vd,G CUp, cfktyghly; kl_Lk; - fpwpjitk; - ult; - kly; - k	(Common to	B.A., B.S	c., BBA., B.COM., BCA., B.COM	CS)								
COURSE Dutcome CO2 vf.fpaq.fs; czHj.jk; thot;pay, newpKiwfisg; Ngzpelj.jy; cO3 ekt vz.ziji intspgsgl.jik; flutpahfi; jhankhopala; gadgl.jily; CO3 iffy, njiHcfs.ft; jhankhopadd; fxfpaj.jt,jij.czHjy; K3 CO4 jhankhopadd; rpwg.ig mwply; K3 JNIT-I jfthy, yffpak, sucfiftpilfs; pithjis; Siftpilfs; Siftpilfs; pryMij kudf;tpilfs; phulpahi-ntsspg; gdokiyapd, kPlyhTithk;, (13 ghlyfs)- ghulpjhrd; Gul;rpf;tp (Ngud;df; nfhz;Ntukjy; -ftpOd);Fk; hypf;fk kPlrpjejjhH tiul jafgsgh - gdog;ghiw Edpfs; -tho;fift Xtpak; Glf;tpijfs;-mg;Jv; uFkhd; - tt/Juk; thHjhTk; -Afp - aphtgi G. (awifapd; vfv;G Kwpg;G) - rpWfij-M-H.Hilhkzp - rhk;gvf;Fs;. DINIT-II ehlfk; -ciueil- ehty; ehlifk; - gpugC;rd; - Kl;il - ciueil - ,uh.Ntq;fihrygjp - mejf; fhyj.jpv; fhg;gp ,yiy -ehty; - ,uh.KUfNts; - kpspHfy; CO2 JNIT-III gf.jp ,vf.fpak; -irtk;- periods: 09 wf.fip ,vf.fpak; -irtk;- periods: 09 wf.fip ,vf.fpak; -irtk;- periods: 09 wf.fip ,vf.fpak; -irtk;- pulkejpuk;- MH;Fix, kdg, jplKiw - gpj;jhgpiwi8a, ghly; kl;k;- khzpf;thrH - jpUthrk;- Gyyha; GOtha;, ghly; kl;k;- ipU%yH - yplkejpuk;- MH;Fix, kdg, jplKiw - gpj;jhgpiwi8a, ghly; kl;k;- khzpf;thrH - jpUthrk;- Gyyha; GOtha;, ghly; kl;k;- regha;fhor;HH - tak; spala, ghly; kl;k;- flygh;- flygh;- ghly;- ghly;	Prerequisite											
CO2		On co	mpletion of the course, the stud	dents will be	able to)				-		
CO2 skl vz.ziji intspagatj.jk; futpahij; jhan.khopage; gadatj.ji); K3 CO3 fty; njlHG;Fj; jhan.khopade; Kf;fqaj.jt;ji zeHjy; K3 CO4 han.khopade; rpwejig mwpiy; K3 CO5 vf.fpa.d;gc;fis Efuk; jowd-fis tsHj.jy; K3 NJIT-1 f.fty, vf.fpak; kuGf;ftpijfs; GJf;ftpijfs; rpwfij Periods: 09	Course	CO1	,yf;fpaq;fs; czHj;Jk; tho;tpay; newpKiwfi	sg; Ngzpelj;jy;.					K3	3		
CO3		CO2 ekJ vz;zj;ij ntspg;gLj;Jk; fUtpahfj; jha;nkhopiag; gad;gLj;Jjy;.										
COS	Outcome	CO3 jfty; njlHGf;Fj; jha;nkhopapd; Kf;fpaj;Jtj;ij czHjy;.										
kuGf;ftpijfs; - ghujpahH-nts;spg; gdpkiyapd; kPlyhTNthk; (13 ghly;fs;)- ghujpjhrd;-Gul;rpf;ftp (Ngud;Gf; nfb;ItNuKjy; - ftpQDf;Fk; hlypf;Fk; kPl;rpiejjhH tiul) jq;fg;gh - gdpg;ghiw Edpfs; - tho;fif Ktpak; GJf;ftpijfs;-mg;ly; uRkhd; - tlY]Uk; thHjhTk; - Afp - cO3 JNIT-II		CO5	,yf;fpa ,d;gq;fis EfUk; jpwd;fis tsHj;jy;.						K3	3		
CO: Co:	UNIT-I		;fpak;- kuGf;ftpijfs;- GJf;ftpijfs;- rpWfij				Periods: 09)	<u> </u>			
CO2 CO3 CO3 CO3 CO4	fhjypf;Fk; kPl;rpje;j	hH tiu) jq	;fg;gh - gdpg;ghiw Edpfs; - tho;f;if >	(tpak;. GJf;ftpijf	-					; CO1		
JNIT-III gf.jp.yf.fpak; -irtk;-jpUQhdrk;ge;lh - Kjy; jpUKiw - NjhLilanrtpad;ghly; kl;Lk; - jpUehTf;furH - ehd;fhk; jpUKiw - Sw;whapdthWghly; d;Lk; - Rej;UH - Vohk; jpUKiw - gp];jhgpjw#Bghly; kl;Lk; - khzpf;fthrfH - jpUthrfk; - Gy;yha; GOtha;ghly; kl;Lk; - jpU%yH - pUke;jpuk; - MHf;Fk; ,Lkpd;ghly; kl;Lk; - fhiuf;fhyk;ikahH-jpUtpul;il kzpkhiy - md;ghy; miltnjt;thWghly; kl;Lk; - ipu%yH - pUtha;nkhop - csd; vdpd;ghly; kl;Lk; - fhiuf;fhyk;ikahH-jpUtpul;il kzpkhiy - md;ghy; miltnjt;thWghly; kl;Lk; - iphajifaho;thH - itak; fspaha;ghly; kl;Lk; - of+jj;jho;thH - md;Ng jfspaha;ghly; kl;Lk; - ofhjj;klk; - ki;jhho;thH - nghpaho;thH jpUnkhop - thf;Fj; J]a;ikghly; kl;Lk; - mghajifaho;thH - ehr;rpahH pUnkhop - vd;G cUfp, dhty;ghly; kl;Lk; - fpwpj;Jttk; -,ul;rz;a kNdhfuk; - Mtpf;FWnte;JaHKjy; ciday;yJ gw;WNjh tiu - ,];yhk; - Fzq;Fb k];jhd;hfpG- uFkhd; fz;zp -milj; kdf;MthjilKjy; vd;fz; tiu JNIT-IV rpw;wpyf;fpak; - Kj;njhs;shapuk; - tNtuWifgk;gpr; Riuaha;2.khly tpiygftthH 3.vd;id ciuay;vdj; njhlq;Fk; ghly;fs; kl;Lk; - cyh-Nyhj;Jq;fknhod; cyh - jhis mutpe;jr; rhjpKjy; epyntd;whs; tiu - fyk;gfk; - jpUtuq;ff;fyk;gfk; - cUkhwog; gygpwg;Gk;Kjy; MBH thry; tiu-rsis* - Kf;Slw;gs;S - ehl;Ltsk; - fiwgl;Ls;slvdj;njhlq;Fk; ghly; kl;Lk; -]}-mofH fps;istpL]] - ,d;nrhy;iyKjy; cgNjrkhf ciug;gha; tiu lififhyg; GytHfs; - ,unkypqf mbfs; - kNhjtkhiy-gb;Njd;Kjy; ngha; cyfpay; tiu - tPukhKqptH jpUf;fhtY)Hf; fyk;gfk; - jio-yghjtpo;g;vdj;njhlq;Fk; ghly; kl;Lk; - K.K.'k,kl]'h - /nfsiK pa;apj;]Pd; gps;isj; jkpo; - tapWGilf;f cz;fpd;wPHghly; kl;Lk; - jio-ygh;hps; Fwy;fpa tuyhW Periods: 09 lkhopg;gapw;rp - 1.typkpFk; Jq;fs; > typkpfh ,lq;fs; - 2.mfuthpirg;gLj;Jy;3.NeHfhzy; - ,yf;fpa tuyhW - ,f;fhy ,yf;fpak;> gf;jp ,yf;fpak;> pw;wpyf;fpak; Fwpj; ghlg;gfpia xl;bal. ecture Periods: 45 Tutorial Periods:- PracticalPeriods:- PracticalPeriods:- PracticalPeriods:- PracticalPeriods:- PracticalPeriods:- PracticalPeriods:- PracticalPeriods:- Stigle; hyly; kl;Lk; - fivig; hyly;	UNIT-II	ehlfk; -c	iueil- ehty;				Periods: 09)				
ff.jp ,yf.fpak;	ehlfk; - gpugQ;	rd; - Kl;il -	ciueil - ,uh.Ntq;flhrygjp - me;jf; fhy	j;jpy; fhg;gp ,y;i	y – ehty; -	- ,uh.KUfl	Nts; - kpspH1	fy;		CO2		
co: d;lk;- Re;juH - Vohk; jpUKiw - gpj;jhgpiw#Bghly; kl;lk; - khzpf;fthrfH - jpUthrfk; - Gy;yha; GOtha;ghly; kl;lk; - jpU%yH - jpUkejjpuk; - MHf;Fk; _ lkpd;ghly; kl;lk; - fhiuf;fhykikahH-jpUtpul;il kzpkhiy - md;ghy; mil;thWghly; kl;lk; - dphapi;faho;thH - itak; fspaha;ghly; kl;lk; - Gphapho;thH - md;Ng _ ifspaha;ghly; kl;lk; - Ngaho;thH - jpUf;fz;Nld; nghd;Nkdpghly; kl;lk; - ek;kho;thH - pUtha;nkhop - csd; vdpd;ghly; kl;lk; - nghpaho;thH - nghpaho;thH - pluhkhop - thf;j; Jha;ikghly; kl;lk; - dphapho;thH - nghpaho;thH - nghpaho;thH - pluhkhop - thf;j; Jha;ikghly; kl;lk; - dphapho;thH - nghpaho;thH - nghpapaho;thH - nghpapapaho;thH - nghpapapapapapapapapapapapapapapapapapapa	UNIT-III	gf;jp ,yf	fpak; -irtk;-				Periods: 09)				
JNIT-IV rpw;wpyf;fpak; - Kj;njhs;shapuk; - cyh- fyk;gfk;- gs;S-,ilf;fhyg; GytHfs; Periods: 09 rpw;wpyf;fpak; - Kj;njhs;shapuk; - 1.NtuWifgk;gpr; Riuaha;2.khiy tpiygfHthH 3.vd;id ciuay;vdj; njhlq;Fk; ghly;fs; kl;Lk; - cyh - Nyhj;Jq;fNrhod; cyh - jhis mutpe;jr; rhjpKjy; epyntd;whs; tiu - fyk;gfk; - jpUtuq;ff;fyk;gfk; - cUkhwpg; gygpwg;Gk;Kjy; MBH thry; tiu-gs;S - Kf;\$lw;gs;S - ehl;Ltsk; - fiwgl;Ls;sJvdj;njhlq;Fk; ghly; kl;Lk; -J}J-mofH fps;istpL J}J - ,d;nrhy;iyKjy; cgNjrkhf ciug;gha; tiu liff;fhyg; GytHfs; - ,uhkypq;f mbfs; - k'hNjtkhiy-gbj;Njd;Kjy; ngha; cyfpay; tiu - tPukhKdptH jpUf;fhtY}Hf; fyk;gfk; - jio-Nghjtpo;g;vdj;njhlq;Fk; ghly; kl;Lk; - K.K'k;klj`h - /nfsJK`pa;apj;jPd; gps;isj; jkpo; - tapWGilf;f cz;fpd;wPHghly; kl;Lk;. JNIT-V nkhopg;gapw;rp-,yf;fpa tuyhW Periods: 09 nkhopg;gapw;rp - 1.typkpFk; ,lq;fs; >typkpfh ,lq;fs; 2.mfuthpirg;gLj;Jjy;3.NeHfhzy; - ,yf;fpa tuyhW - ,f;fhy ,yf;fpak;> gf;jp ,yf;fpak;> rpw;wpyf;fpak; Fwpj;j ghlg;gFjpia xl;baJ. Lecture Periods: 45 Tutorial Periods:- PracticalPeriods:- TotalPeriods:45 Fext Books (Minimum 2 and maximum 3 - Latest editions to be given) 1. ghujpahH - ghujpahH ftpijfs;> Kindle Edition> Published June 2, 2020. 2. rptFkhH. v];.> - nfhq;FNjH tho;fif> ghly; njhFg;G E}y; - njhFjp - 1 Aidnll; iul;HH];> nrd;id -86. Kjw;gjpg;G 2003. 3. #lhkzp.MH jdpikj; jspH> NjHe;njLj; prwfijfs;> fhyr;RtL gjpg;gfk;> Kjy; gjpg;G: nrg;lk;gH 2013. 4. gpugQ;rd; - [Ptejp (ehlfq;fs;) - ftpjh gg;spNf\d;> 8 khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 5. KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014.	jpUke;jpuk; - MHf; jfspaha;ghly; kl; jpUtha;nkhop - csd jpUnkhop— vd;G cl	nk; jpUKiw Fk; ,Lkpd; ;Lk; -G+jj l; vdpd; Ufp ,dNty	/ - gpj;jhgpiw#Bghly; kl;Lk; - khzpf;fth ghly; kl;Lk; - fhiuf;fhyk;ikahH-jpUtpul; ;jho;thH - md;Ng jfspaha;ghly; kl;L ghly; kl;Lk; - nghpaho;thH - nghpaho;thl ;ghly; kl;Lk; - fpwpj;Jtk; - ,ul;rz;a kNdh	rfH - jpU il kzpkhiy - md; k; - Ngaho;thH H jpUnkhop - th	thrfk; - G ghy; miltn I - jpUf; f;Fj; J}a;ik	y;yha; GC njt;thW fz;Nld; n ghly; k	Otha;ghly; kl;l ghly; kl;Lk;. itz t ghd;Nkdpgh l;Lk; -Mz;lhs	Lk; - jpU%yF t k; - ngha;ifa ly; kl;Lk; - ; -	I aho;thH - itak ek;kho;thH ehr;rpahI	; CO3		
ENyhj;Jq;fNrhod; cyh - jhis mutpe;jr; rhjpKjy; epyntd;whs; tiu - fyk;gfk; -jpUtuq;ff;fyk;gfk; - cUkhwpg; gygpwg;Gk;Kjy; MBH thry; tiu -gs;S - Kf;\$ w;gs;S - eh ;Ltsk; - fiwg ;Ls;sJvdj;njhlq;Fk; ghly; kl;Lk; -J}J-mofH fps;istpL J}J - ,d;nrhy;ivKjy; cgNjrkhf ciug;gha; tiu ilf;fhyg; GytHfs; - ,uhkypq;f mbfs; - k`hNjtkhiy—gbj;Njd;Kjy; ngha; cyfpay; tiu — tPukhKdptH jpUf;fhtY}Hf; fyk;gfk; - jio—Nghjtpo;g;vdj;njhlq;Fk; ghly; kl;Lk; - K.K`k;klj`h - /nfsJK`pa;apj;jPd; gps;isj; jkpo; - tapWGilf;f cz;fpd;wPHghly; kl;Lk;. JNIT-V	UNIT-IV			;- gs;S-,ilf;fhyg;	GytHfs;		Periods: 09)		<u>i</u>		
nkhopg;gapw;rp - 1.typkpFk; ,lq;fs; >typkpfh ,lq;fs; 2.mfuthpirg;gLj;Jjy;3.NeHfhzy; - ,yf;fpa tuyhW - ,f;fhy ,yf;fpak;> gf;jp ,yf;fpak;> pw;wpyf;fpak; Fwpj;j ghlg;gFjpia xl;baJ. Lecture Periods: 45	rpw;wpyf;fpak; - FNyhj;Jq;fNrhod; c gs;S - Kf;\$lw;gs;S - ,ilf;fhyg; GytHfs; Nghjtpo;g;vdj;nj	Kj;njhs;s yh - jhis ehl;Ltsk; - ,uhky hlq;Fk; gh	hapuk; - 1.NtuWifgk;gpr; Riuaha;2.k mutpe;jr; rhjpKjy; epyntd;whs; tiu - f fiwgl;Ls;sJvdj;njhlq;Fk; ghly; kl;Lk; -J}, rpq;f mbfs; - k`hNjtkhiy—gbj;Njd;K lly; kl;Lk; - K.K`k;kJj`h - /nfsJK`pa;apj;jPd	chiy tpiygfHthH y k;gfk; -jpUtuq; J-mofH fps;istpL jy; ngha; cyf _l	3.vd;i ff;fyk;gfk; J}J - ,d;nı bay; tiu	cUk- hy;iy tPuk-	vdj; njhlq;F khwpg; gygpwg; Kjy; cgNjrkhf ci khKdptH jpUf; vPHghly; kl;L	k; ghly;fs; ;Gk;Kjy; N ug;gha; tiu fhtY}Hf; fy k;.	1BH thry; tiu			
COS Lecture Periods: 45 Tutorial Periods:- PracticalPeriods:- TotalPeriods:45 Text Books (Minimum 2 and maximum 3 – Latest editions to be given) 1. ghujpahH – ghujpahH ftpijfs;> Kindle Edition> Published June 2, 2020. 2. rptFkhH. v];.> - nfhq;FNjH tho;f;if> ghly; njhFg;G E}y; - njhFjp -1 Aidnll; iul;lH];> nrd;id -86. Kjw;gjpg;G 2003. 3. #lhkzp.MH jdpikj; jspH> NjHe;njLj;j rpWfijfs;> fhyr;RtL gjpg;gfk;> Kjy; gjpg;G: nrg;lk;gH 2013. 4. gpugQ;rd; - [Ptejp (ehlfq;fs;) – ftpjh gg;spNf\d;> 8> khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 5. KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014.									· · · ·			
 fext Books (Minimum 2 and maximum 3 – Latest editions to be given) ghujpahH – ghujpahH ftpijfs;> Kindle Edition> Published June 2, 2020. rptFkhH. v];.> - nfhq;FNjH tho;f;if> ghly; njhFg;G E}y; - njhFjp -1 Aidnll; iul;lH];> nrd;id -86. Kjw;gjpg;G 2003. #lhkzp.MH jdpikj; jspH> NjHe;njLj;j rpWfijfs;> fhyr;RtL gjpg;gfk;> Kjy; gjpg;G: nrg;lk;gH 2013. gpugQ;rd; - [Ptejp (ehlfq;fs;) – ftpjh gg;spNf\d;> 8> khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014. 				g;gLj;Jjy;3.NeH	thzy; - ,	yf;fpa tu	i yhW - , f;fhy ,	,yf;fpak;> g	f;jp ,yf;fpak;	CO5		
 ghujpahH – ghujpahH ftpijfs;> Kindle Edition> Published June 2, 2020. rptFkhH. v];.> - nfhq;FNjH tho;f;if> ghly; njhFg;G E}y; - njhFjp -1 Aidnll; iul;lH];> nrd;id -86. Kjw;gjpg;G 2003. #lhkzp.MH jdpikj; jspH> NjHe;njLj;j rpWfijfs;> fhyr;RtL gjpg;gfk;> Kjy; gjpg;G: nrg;lk;gH 2013. gpugQ;rd; - [Ptejp (ehlfq;fs;) – ftpjh gg;spNf\d;> 8> khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014. 	Lecture Periods	s: 45	Tutorial Periods:-	Practica	alPerioc	ls:-	T	otalPerio	ds:45			
 rptFkhH. v];.> - nfhq;FNjH tho;f;if> ghly; njhFg;G E}y; - njhFjp -1 Aidnll; iul;lH];> nrd;id -86. Kjw;gjpg;G 2003. #lhkzp.MH jdpikj; jspH> NjHe;njLj;j rpWfijfs;> fhyr;RtL gjpg;gfk;> Kjy; gjpg;G: nrg;lk;gH 2013. gpugQ;rd; - [Ptejp (ehlfq;fs;) – ftpjh gg;spNf\d;> 8> khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014. 												
 3. #lhkzp.MH jdpikj; jspH> NjHe;njLj;j rpWfijfs;> fhyr;RtL gjpg;gfk;> Kjy; gjpg;G: nrg;lk;gH 2013. 4. gpugQ;rd; - [Ptejp (ehlfq;fs;) – ftpjh gg;spNf\d;> 8> khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 5. KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014. 												
 4. gpugQ;rd; - [Ptejp (ehlfq;fs;) – ftpjh gg;spNf\d;> 8> khrpyhkzp njU> ghz;bg[hH> jp.efH> nrd;id -600 017 5. KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014. 												
5. KUfNts;. ,uh.> - kpspHfy;> lk;nghopy; gjpg;gfk;> jpUg;G+H> ,uz;lhk; gjpg;G> 2014.	-				-	-						
	_						u,iu -000 01/					
ARTONOMO LA GALA LA MANDALINA L. L'ATACT A CHILANA TO MA COLLON					ir, gjpg;c	ı~ 2U14.						

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- 1. ty;ypf;fz;zd;> GJf;ftpijapd; Njhw;wKk; tsh;r;rpAk;> =nrz;gfh gjpg;gfk;> [dthp>1> 2020.
- 2. rpw;gpghyRg;gpukzpak; kw;Wk; ePygj;kehgd; (g.Mrp.) Gjpa jkpo; ,yf;fpa tuyhW> njhFjp-1>2>3> rhfpj;jpa mfhnjkp> GJnly;yp> 2013.
- 3. ghf;fpaNkhp> tifik Nehf;fpy; jkpo; ,yf;fpa tuyhW (nrk;ik kw;Wk; tphpTg; gjpg;G)> ghhpepiyak;. nrd;id>
- 4. **Mde;jd;> KidtH.R.> jkpo; ,yf;fpa tuyhW>** fz;kzp gjpg;gfk;> jpUr;rp-2. ,Ugj;jp %d;whk; gjpg;G– 2015.
- 5. **gue;jhkdhH> m.fp.> ey;y jkpo; vOj Ntz;Lkh>** ghhp epiyak;> nrd;id> 1998.

Web References (Minimum 5)

1. http://www.tamilweb.com 3. http://www.tamilkodal.com 4. www.store.tamillexican.com 5. www.store.tamillexican.com 6. www.tamilkodal.com 7. http://www.tamilkodal.com 7. www.tamilkodal.com 7. <a href="http://www.tamil

* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

COs		Progra	am Outcome	Program Specific Outcomes (PSOs)				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3
3	2	2	3	3	2	3	2	3
4	3	3	2	1	2	2	3	2
5	3	3	3	3	3	3	3	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Assessment Pattern as per Bloom's Taxonomy

Test / Bloom's Category*	Remembering (K1) %	Understanding (K2) %	Applying (K3) %	Analyzing (K4) %	Evaluating (K5) %	Creating (K6) %	Total %					
CAT1	10	20	70	-	-	-	100					
CAT2	10	20	70	ı	ı	-	100					
ESE	10	30	60	-	-	-	100					
* ±3% may b	* ±3% may be varied											

Evaluation Method

		Contir	nuous Asse	(CAM)	End		
Assessment	CAT 1	CAT 2	Model Exam	Assignment*	Attendance	Semester Examination (ESE) Marks	Total Marks
Marks	10		5	5	5	75	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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Department	French		Progra	amme : I	BSc. Nutr	ition and	Dieteti	cs	
Semester	I		Course MIL	e Catego	ory Code:	*End S	emester	Exam 7	Гуре: ТІ
Course Code	A23FRT1010	•	Į .	Periods/	'Week	Credit	Ma	ximum	Marks
			L	Т	Р	С	CAM	ESE	TM
Course Name	FRENCH I		3	0	0	3	25	75	100
		B.SC., and BCA Branches)							
Prerequisite		guage in class 12 th							
Course Objectiv	es To introduce	the basics of French languag	e to the students						
	To enable th	e students to read, understar	nd and write simpl	le senten	ices				
	To help ther	n to grasp the fundamentals c	of French gramma	r					
	To make the	students to formulate correc	t phrases						
		them French and Francopho		their cult	ures				
		on of the course, the student							apping st Level
	CO1 have a	general understanding of the	e language						K1
	<u> </u>	e and interpret simple phrase		h					K2
Course		he basics of French grammar							K3
Outcomes		unicate and ask basic question	ns in Franch langu	200					
		-							K4
JNIT-I	S'introduire	ciate the diversity and multipli	icity of French and	ı Francop	onone wor	Periods	-00		K5
4. Vous dansez	ıelqu'un et donr	er des informations				Periods	•09		
	ko et compagnie				<u> </u>	Perious	.09		CO
2. Dire ce qu'or		•							
3. Les voisins de									
4. Demander d	es informations :	sur quelqu'un							
UNIT-III	Expliquer quel	que chose				Periods	:09		-
1. Tu vas au Lux									
	ı, dire d'où on vi pour l'inscriptio								CO
	in, en avion	11							
· · · · · · · · · · · · · · · · · · ·	•	ser quelque chose							
UNIT-IV		uestions et commander				Periods	:09		
	sieur, le BHV s'il	vous plait							СО
	ano choso do ==	andar la priv							
2. Au marché	-	аниенте рих							
3. Acheter quel	~· ·								
 Acheter quel On déjeune i 	urant, compren	dre un menu				Periods	·09		å
 Acheter quel On déjeune i Aller au resta 		dre un menu poser quelque chose				i Cilous	.03		
 Acheter quel On déjeune i Aller au resta UNIT-V On va chez n 	Inviter et pro					i Cilous	.03		~~
 Acheter quel On déjeune i Aller au resta UNIT-V On va chez n Proposer que 	Inviter et pro na copine ? elque chose	poser quelque chose			<u></u>	T CITOUS	.03		со
3. Acheter quel 4. On déjeune i 5. Aller au resta UNIT-V 1. On va chez m 2. Proposer que 3. Demander et	Inviter et pro na copine ? elque chose					Terious			со
3. Acheter quel 4. On déjeune i 5. Aller au resta UNIT-V 1. On va chez m 2. Proposer que 3. Demander et 4. Chez Susana	Inviter et pro na copine ? elque chose donner des info	poser quelque chose				renous			СО
3. Acheter quel 4. On déjeune i 5. Aller au resta UNIT-V 1. On va chez m 2. Proposer que 3. Demander et 4. Chez Susana	Inviter et pro na copine ? elque chose donner des info ez quelqu'un	poser quelque chose	Dracti	cal Perio	nds:-		Periods	s: 45	СО

T. foris

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- 2. Nathalie Hirschsprung and Tony Tricot, Cosmopolite 1, Hachette editions, 2017
- 3. Caroline Veltcheff and Stanley Hilton, Preparation du Delf A1, Hachette editions, 2011

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- 1. Régine Mérieux and Yves Loiseau, Latitudes 1, Didier editions, 2017
- 2. Annie Berthet and Emmanuelle Daili, Alter Ego + A1, Hachette editions, 2012
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- 2. https://www.rfi.fr
- 3. https://www.lemonde.fr
- 4. https://www.frenchpodcasts.com
- 5. https://www.coursera.org
 - * TE Theory Exam, LE Lab Exam

COs/POs/PSOs Mapping

COs		Progra	ım Outcome		Progran	n Specific Ou (PSOs)	utcomes	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	3	3	3	3	3	3	3
2	3	3	3	3	2	3	3	3
3	3	3	3	3	3	3	2	3
4	2	3	2	2	3	3	3	3
5	3	3	3	3	3	3	3	3

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Evaluation Method

		Contir	nuous Asse	essment Marks	(CAM)	End	
Assessment	CAT 1	CAT 2	Model Exam	Assignment*	Attendance	Semester Examination (ESE) Marks	Total Marks
Marks	1	0	5	5	75	100	

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

COs/POs/PSOs Mapping

/ /		10						
COs		Progra	m Outcome	es (POs)		Program	Specific Outcom	es (PSOs)
COs	PO 1	PO 2	PO 3	PO 4	PO 5	PSO 1	PSO 2	PSO 3
1	3	3	3	3	3	3	3	3
2	3	3	3	3	3	3	3	3
3	3	2	3	3	2	3	3	3
4	2	3	2	1	2	2	3	2
nutesof th	e Foyrth N	Meeting of	BoS3(B.S	c. Nutritio	n and Diet	etics) 3	3	3

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Correlation Level

High	Moderate	Low
3	2	1

Evaluation Method

		Cont	inuous Ass	essment Marks (CAM)	End Semester	Total
Assessment	CAT	CAT	Model	Assignment*	Attendance	Examination	Marks
	1	2	Exam	Assignment	Attenuance	(ESE) Marks	IVIAINS
Marks	1	0	5	5	5	75	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

T. forth

Department	Food Science Programme: B.Sc Nutrition and Dietetics First Course Category Code: DSC *End Semester Exam Type									
Semester	First		Course	Categor	ry Code	: DSC *Er	nd Semest	er Exam T	ype: T	
Course Code	A23N	DT101D	Perio	ds / We	eek	Credit		ximum Ma	arks	
			L	Т	Р	С	CAM	ESE	TM	
Course Name	NUTF	RITION SCIENCE - I	4	0	0	4	25	75	100	
Prerequisite		ients, Sources and Functions								
Course	ļ	the basic concepts and definition		lutrition	and He	ealth.				
Objectives		nine the Energy value of foods.			-lll					
	·	rstand the functions, sources a				rates.				
	ļ	stand the functions, sources an stand the functions, sources an	······································		eins.					
		mpletion of the course, the stu						BT Ma	nning	
	On cor	inpletion of the course, the stu	idents will be a	ible to				(Highes		
Course	CO1	Obtain the basic knowledge at	oout Nutrition a	and its r	elation	to health			2	
Outcome	CO2	Understand the Energy value	of foods and its	s utilizat	tion			K		
	CO3	Obtain the in depth knowledge				in human h	nealth		:- :3	
	CO4	Obtain the in depth knowledg							3	
	CO4								.3 .3	
UNIT-I		Obtain the in depth knowledg	ge of Fat and its	role III	Hulliali	Periods: 12		<u> </u>	.3	
Nutritional Sta Inter relationsh Reference Mar	tus, Mal nip betw		er Nutrition, In		•	ific Deficiend	cy.			
Nutritional Sta Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affectin	tus, Mal nip betw n and Wo Energ Direct an Benedict ng BMR of Basal	nutrition – Under Nutrition, Oveen Nutrition and Health, Vicioomen. Sy d Indirect Calorimetry, Determ's Oxy-Calorimeter. Total Energ	ver Nutrition, In ous Cycle, Virtuo ination of Ener sy requirement,	gy Valu Basal N	e. e of Fo	Periods: 1	cy.		CC	
Nutritional Sta Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affectin	tus, Mal nip betw n and Wo Energ Direct an Benedict ng BMR of Basal of Food	nutrition – Under Nutrition, Oveen Nutrition and Health, Vicioomen. Sy d Indirect Calorimetry, Determ's Oxy-Calorimeter. Total Energy. Metabolism - Direct Calorimet	ver Nutrition, In ous Cycle, Virtuo ination of Ener sy requirement,	gy Valu Basal N	e. e of Fo	Periods: 1	2		CO	
Nutritional Star Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affection Measurement Thermic Effect UNIT-III Composition, F Digestion and A	tus, Malaip betwomen and Work Energy Direct and Benedict and BMR of Basal of Food Carbo Croperties	nutrition – Under Nutrition, Oveen Nutrition and Health, Vicioomen. Sy Id Indirect Calorimetry, Determing Soxy-Calorimeter. Total Energy Metabolism - Direct Calorimeter, Factors affecting TEF. Phydrates es, Classification, Functions, Souon of carbohydrates. Dietary Fi	ver Nutrition, In ous Cycle, Virtuo ination of Ener sy requirement, ry, Indirect Calo	gy Valu Basal Norimetre	e. e	Periods: 13 od (Bomb lic Rate, Periods: 13	z zary Fibre.		СО	
Nutritional Sta Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affection Measurement Thermic Effect UNIT-III	etus, Mal nip betw n and Wo Energ Direct and Benedict ng BMR of Basal of Food Carbo	nutrition – Under Nutrition, Oveen Nutrition and Health, Vicioomen. Sy Id Indirect Calorimetry, Determing Soxy-Calorimeter. Total Energy Metabolism - Direct Calorimeter, Factors affecting TEF. Phydrates es, Classification, Functions, Souon of carbohydrates. Dietary Fi	ver Nutrition, In ous Cycle, Virtuo ination of Ener sy requirement, ry, Indirect Calo	gy Valu Basal Norimetre	e. e	Periods: 12 od (Bomb lic Rate, Periods: 12	z zary Fibre.		СО	
Nutritional Star Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affection Measurement Thermic Effect UNIT-III Composition, F Digestion and A UNIT-IV Composition, C Nutritional Class	tus, Malaip betwomen and Work Energy Direct and Benedicting BMR of Basal of Food Carbo Properties Protessifications protessifications protessifications protessifications protessifications and the second control of the se	nutrition — Under Nutrition, Oveen Nutrition and Health, Vicionomen. By Id Indirect Calorimetry, Determination's Oxy-Calorimeter. Total Energy Metabolism - Direct Calorimetry, Factors affecting TEF. Dhydrates Pes, Classification, Functions, Sources on of carbohydrates. Dietary Finins Ition, Functions, Sources & Require on of Amino Acids, Digestion, Alin utilization, Methods of Protesting Technology.	ver Nutrition, In us Cycle, Virtuo ination of Ener ty requirement, ry, Indirect Calc urces & Require ber –Sources, T	ements. Types ar	e. e of Fooderabo y, and Func	Periods: 12 od (Bomb lic Rate, Periods: 12 tions of Diet Periods: 12	z zary Fibre.		co	
Nutritional Star Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affection Measurement Thermic Effect UNIT-III Composition, F Digestion and A UNIT-IV Composition, C Nutritional Class Factors affection NPU and NPR,	tus, Malaip betwomen and Work Energy Direct and Benedicting BMR of Basal of Food Carbo Properties Protessifications protessifications protessifications protessifications protessifications and the second control of the se	nutrition — Under Nutrition, Oveen Nutrition and Health, Vicionomen. By Id Indirect Calorimetry, Determination's Oxy-Calorimeter. Total Energy Metabolism - Direct Calorimetry, Factors affecting TEF. Dhydrates Pes, Classification, Functions, Sources on of carbohydrates. Dietary Finins Ition, Functions, Sources & Require on of Amino Acids, Digestion, Alin utilization, Methods of Protesting Technology.	ver Nutrition, In us Cycle, Virtuo ination of Ener ty requirement, ry, Indirect Calc urces & Require ber –Sources, T	ements. Types ar	e. e of Fooderabo y, and Func	Periods: 12 od (Bomb lic Rate, Periods: 12 tions of Diet Periods: 12	zary Fibre.		co	
Nutritional Star Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affection Measurement Thermic Effect UNIT-III Composition, F Digestion and A UNIT-IV Composition, C Nutritional Class Factors affectin NPU and NPR, UNIT-V	Direct and Benedict and Basal of Food Carbo Cropertic Absorpti Prote Classifications prote chemica	nutrition — Under Nutrition, Oveen Nutrition and Health, Vicionomen. By Id Indirect Calorimetry, Determination's Oxy-Calorimeter. Total Energy Metabolism - Direct Calorimetry, Factors affecting TEF. Dhydrates Pes, Classification, Functions, Sources on of carbohydrates. Dietary Finins Ition, Functions, Sources & Require on of Amino Acids, Digestion, Alin utilization, Methods of Protesting Technology.	ver Nutrition, Incus Cycle, Virtuo ination of Energy requirement, ry, Indirect Calc urces & Requirement, ber —Sources, Tources, T	ements. Types ar	e. e of Fooderabo y, and Func	Periods: 12 od (Bomb lic Rate, Periods: 12 tions of Diet Periods: 12	zary Fibre.		CO CO	
Nutritional Star Inter relationsh Reference Mar UNIT-II Energy Units, E Calorimeter), E Factors affection Measurement Thermic Effect UNIT-III Composition, F Digestion and A UNIT-IV Composition, C Nutritional Class Factors affection NPU and NPR, UNIT-V Composition, C Composition, C	birect and Benedict and Basal of Food Carbo Cropertie Absorpti Prote Classification protection protection chemica	nutrition – Under Nutrition, Oveen Nutrition and Health, Vicioomen. 3y Id Indirect Calorimetry, Determing Soxy-Calorimeter. Total Energy Metabolism - Direct Calorimeter, Factors affecting TEF. Sohydrates Les, Classification, Functions, Sources on of carbohydrates. Dietary Finsions Letion, Functions, Sources & Require on of Amino Acids, Digestion, Alin utilization, Methods of Proteil score.	ver Nutrition, Incus Cycle, Virtuo ination of Energy requirement, ry, Indirect Calc urces & Require ber –Sources, 1 uirements bsorption and I ein Evaluation -	ements. Types ar Deficien	e. e of Fooderabo	Periods: 12 od (Bomb lic Rate, Periods: 12 tions of Diet Periods: 12 M: Types and	zary Fibre.		cc	

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* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

COs	I	Program	Outco	mes (Po	Program Specific Outcomes (PSOs)				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3	
1	3	2	2	1	2	2	1	2	
2	2	-	1	1	2	2	2	3	
3	3	3	3	2	3	3	3	2	
4	3	3	3	2	3	3	3	2	
5	3	3	3	2	3	3	3	2	

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Evaluation Method

		Continu	ious Asse	essment Marks	(CAM)	End	
Assessment	CAT 1	CAT 2	Model Exam	Assignment*	Attendance	Semester Examination (ESE) Marks	Total Marks
Marks	1	0	5	5	5	75	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

T. forth

Semester	Food	Science	Sc Nutri y Code:	tion and D					
JC111CJC1	First		nd Semeste						
Course Code	A23N	DT102D		ds / W	r	Credit		imum M	······
6	F00D	COLLINGE	L	Т	P	С	CAM	ESE	TM
Course Name	FOOD:	SCIENCE	4	0	0	4	25	75	100
Prerequisite	Basic	Food Groups, cooking methods	s, effects of	cookir	ng.				i
Course	1.	Know about the principles	and chemist	ry of fo	ods.				
Objectives	2.	Understand the food chem	istry of Cere	eals & P	ulses.				
Objectives	3.	Understand the food chem	istry of fats,	nuts a	nd cond	iments.			
	4.	Understand the food chem	istry of vege	etables,	fruits ar	nd beverage	es.		
	5.	Understand the food chem	istry of anir	nal foo	ds.			*	
	On con	npletion of the course, the studer	nts will be a	ble to					apping
Course	601	Obtain the knowledge in making	r food choic	oc and	ohtainir	a an adear	ista diat	··•	st Level K3
Outcome	CO1		-						
Outcome	CO2	Obtain an insight into the comp Pulses.	osition, stru	icture a	na nutri	tive value (of Cereals &		К3
	соз	Obtain an insight into the comp	osition, stru	icture a	nd nutri	tive value o	of fats, nuts	ı	К3
		and condiments.							
	CO4	Gain knowledge about the role	e of vegetal	oles, fru	iits and l	peverages.		l	К3
	CO5	Get acquainted with the detaile	ed chemistry	of anii	mal food	ls.		l	К3
UNIT-I	Introd	luction of Food Groups and Cookir	ng Methods			Periods: 1	2		
Foods Classic	f:+:		ced Food, Food pyramid, My plate Cooking- Obje						
roous, Classi	ncation,	Functions, Food groups, Balance	ed Food, Fo	od pyi	ramid, N	∕ly plate C	ooking- Obj	jectives	of
		Functions, Food groups, Balance reparation, cooking methods, Dry						jectives	of CO1
Cooking, Prelin	ninary pı	•					5.	jectives	1
Cooking, Prelim	Cerea	reparation, cooking methods, Dry	heat, Moist	heat, N	Merits ar	nd Demerits Periods: 1	2		CO1
Cooking, Prelim UNIT-II Cereals – Stro	Cereaucture,	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive value	heat, Moist	heat, N	Merits ar	nd Demerits Periods: 1	2		CO1
Cooking, Prelim UNIT-II Cereals – Stro gelatinization, o	Cerea ucture, dextriniz	reparation, cooking methods, Dry	heat, Moist ue, cooking	heat, N	Merits ar	Periods: 1 ereals, fur	s. 2 actional pro	perties	- CO2
Cooking, Prelim UNIT-II Cereals — Strugelatinization, Generation, Generation	Cerea ucture, dextriniz	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(be	heat, Moist ue, cooking rief) – Decc	heat, N	Merits ar	Periods: 1 ereals, fun	2 actional pro ermentatio	operties n, Facto	- CO2
Cooking, Prelim UNIT-II Cereals – Strugelatinization, of Pulses- Components of the Cooking C	Cerea ucture, dextrinizosition a	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery.	heat, Moist ue, cooking rief) – Decc	heat, N	Merits ar	Periods: 1 ereals, fun	2 actional pro ermentatio	operties n, Facto	- CO2
Cooking, Prelim UNIT-II Cereals – Strugelatinization, of Pulses- Composition affecting cooki	Cereaucture, dextrinizosition ang quali	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing (but of pulses, functional properties ituents, Pulse cookery.	heat, Moist ue, cooking rief) – Deco s - binding,	qualit ortication	Merits ar	Periods: 1 ereals, fun	2 actional professional profess	operties n, Facto	- CO2
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of Pulses — Composition of the Cooking Cooking Presence of too UNIT-III	Cereaucture, dextrinizes of gualickic const	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties)	heat, Moist ue, cooking rief) – Deco s - binding, and Condin	quality qualit	derits ar by of coon, Gerr	Periods: 1 ereals, fun mination, F sification, f Periods: 1	2 Inctional professional profes	operties n, Facto I viscosi	CO1
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of Pulses — Composite Cooking Cooking Presence of tooking Cooking — Co	Cereaucture, dextrinizes of the constitution and qualication and Fats Amposition and the constitution and the cons	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter	quality qualit	derits ar by of coon, Gerr	Periods: 1 ereals, fun mination, F sification, f Periods: 1	2 Inctional professional profes	operties n, Facto I viscosi	CO1
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of Pulses — Composite of tox Presence of tox UNIT-III Fats & Oils — Cofactors affecting	Cereaucture, dextrinizes qualication and qualicatic constant Fats Acompositing absorp	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Type	neat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery.	quality qualit	derits ar	Periods: 1 ereals, fun mination, F sification, f Periods: 1	2 Inctional professional profes	operties n, Facto I viscosi	CO1 CO2 ors ty,
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of the pulses — Composite of the presence of too the presence of the p	Cereaucture, dextrinizes of constant Fats A compositing absorpeds-Co	ls and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cook	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se	quality qualit	derits ar	Periods: 1 ereals, fun mination, F sification, f Periods: 1	2 Inctional professional profes	operties n, Facto I viscosi	CO2
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of Pulses — Composition of the Cooking Cooking Presence of too UNIT-III Fats & Oils — Coffection of the Cooking Cooking of the Cooking Cookin	Cereaucture, dextrinized of the constant of th	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cookerposition and Nutritive value, Nutritive v	neat, Moist ue, cooking rief) – Deco and Condin pes, Shorter ery. ts and oil se y.	quality qualit	derits ar	Periods: 1 ereals, fun mination, F sification, f Periods: 1	2 Eermentatio Coaming and 2 On oil absorb	operties n, Facto I viscosi	CO2
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of Pulses — Composite of too UNIT-III Fats & Oils — Coffections affecting cooking factors affecting cooking presence of too UNIT-III Fats & Oils — Coffections affecting cooking affecting affecting cooking factors affecting factors affecting cooking and Oil sees and Continuity and Oil sees and Continuity affects	Cereaucture, dextrinizes of constant of co	Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cookerposition and Nutritive value, Nuts: Medicinal value, uses in cookerp	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se y. rages	quality qualit	ey of coon, Gern, emul	Periods: 1 ereals, fun mination, F sification, f Periods: 1 ect of heat	2 cermentatio coaming and on oil absorb	n, Facto I viscosi rption ai	CO2
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of the presence of too the presence of too the presence of the presenc	Cereaucture, dextrinized osition and qualication and gualication and gualicati	reparation, cooking methods, Dry Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cooker mposition and Nutritive value, Nutritive	neat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se y. rages llue, Selection	qualition qualition qualitication gelation ments along of eds cooling on, Pign	ey of coon, Gerrand, emulon, e	Periods: 1 ereals, fun mination, F sification, f Periods: 1 ect of heat Periods: 1 nzymes and	2 fermentatio coaming and common absorption and abs	n, Facto I viscosi rption au	CO: - CO: ors ty, nd CO:
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of the pulses — Composite of the presence of too the presence of the p	Cerea ucture, dextriniz osition a ng quali kic const Fats A ompositi g absorp eeds- Co diments veget lassificat fication,	Is and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(but of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cooker on and Nutritive value,	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se y. rages lue, Selectio	quality qualit	derits ar y of coon, Gerr n, emul fats, Effe	Periods: 1 ereals, fun mination, F sification, f Periods: 1 ect of heat Periods: 1 nzymes and enzymation	2 cermentatio coaming and on oil absorb diflavour core and non-	n, Factor d viscosif rption ai	CO: CO: CO: CO: CO: CO: CO: CO:
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of Pulses — Composite of too UNIT-III Fats & Oils — Coffectors affecting Muts and Oil set Spices and Control UNIT-IV Vegetables — Classif	Cerea ucture, dextriniz osition a ng quali kic const Fats A ompositi g absorp eeds- Co diments veget lassificat fication,	ls and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cooker mposition and Nutritive value, Nuts: Medicinal value, uses in cooker ables And Fruits, Sugars and Beveion, Composition and Nutritive Value, Composition and Nutritive Value.	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se y. rages lue, Selectio	quality qualit	derits ar y of coon, Gerr n, emul fats, Effe	Periods: 1 ereals, fun mination, F sification, f Periods: 1 ect of heat Periods: 1 nzymes and enzymation	2 cermentatio coaming and on oil absorb diflavour core and non-	n, Factor d viscosif rption ai	CO2 ors ty, nd CO3
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of the pulses — Composition of the presence of tox UNIT-III Fats & Oils — Composition of the pulses — Composition of the pulses — Composition of the pulses — Classification of the pulses — C	Cerea ucture, dextriniz osition a ng quali kic const Fats A ompositi g absorp eeds- Co diments assificat fication, ening of	ls and Pulses Composition and Nutritive valuation, Cereal cookery. Ind Nutritive value, Processing(buty of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cooker mposition and Nutritive value, Nuts: Medicinal value, uses in cooker ables And Fruits, Sugars and Beveion, Composition and Nutritive Value, Composition and Nutritive Value.	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se y. rages lue, Selectio	quality qualit	derits ar y of coon, Gerr n, emul fats, Effe	Periods: 1 ereals, fun mination, F sification, f Periods: 1 ect of heat Periods: 1 nzymes and enzymation	2 cermentatio coaming and on oil absorb diflavour core and non-	n, Factor d viscosif rption ai	CO2 CO2 ors ty, nd CO3
Cooking, Prelim UNIT-II Cereals — Strugelatinization, of gelatinization, of gelatinizat	Cereaucture, dextrinized osition and qualification and and and and and and and and and an	Is and Pulses Composition and Nutritive valuation, Cereal cookery. Is and Nutritive value, Processing (but of pulses, functional properties ituents, Pulse cookery. Ind Oils, Nuts and Oilseeds, Spices on and Nutritive value of fats, Typotion of oil, Role of fats/oil in cooker ituents and Nutritive value, Nutritive value, Nutritive value, Nutritive value, Nutritive value, Nutritive Value, Composition and Nutritive Value, Composition and Nutritive Value, Pectic substances and control of the Nutritive Value, Pectic substances and Co	heat, Moist ue, cooking rief) – Deco s - binding, and Condin pes, Shorter ery. ts and oil se y. rages lue, Selectio lue, post-ha different typ	quality qualit	derits ar	Periods: 1 ereals, fun mination, F sification, f Periods: 1 ect of heat Periods: 1 nzymes and enzymation igments- w	2 cermentatio coaming and on oil absorb diflavour core and non-	n, Factor d viscosif rption ai	CO1 CO2 ors ty, nd CO3

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Milk – Composition and Properties of milk, Nutritive Value, effect of heat, acid and enzymes, Processing, Milk Products, Types, Role of milk and milk products in cookery.

CO5

Egg- Structure, Composition and Nutritive Value, Quality of eggs, Egg cookery, Role of eggs in cookery.

Fleshy Foods- Composition and Nutritive value of meat, Selection of meat, Post martem changes in meat, . Ageing of meat, Tendering Meat.

Poultry - Classification, Processing, Composition and Nutritive value, **Fish** - Classification, Composition, Selection, Fish cookery, Spoilage, Preservation and storage.

Lecture Periods: 60 Tutorial Periods: Practical Periods: - Total Periods: 60

Text Books

- 1. Srilakshmi. B. Food Science, New Age International Pvt Ltd Publishers, 3rd Edition, 2005.
- 2. Shakuntala Manay, Shadaksharaswamy. M Foods, Facts and Principles, New Age International Pvt Ltd Publishers, Sixth Edition, 2015.
- 3. Usha Chandrasekhar, Food Science and Application in Indian Cookery, Phoenix Publishing House P. Ltd., New Delhi, 2002.
- 4. Food science, Chemistry and Experimental foods by M. Swaminathan.
- 5. Swaminathan, M.: Hand Book of Food Science and Experimental Food

Reference Books

- 1. Brow, A., Understanding Food, Thomson Learning Publications, Wadsworth, 2000.
- 2. Mehas, K.Y. and Rodgers, S.L. Food Science and You, McMillan McGraw Company, New York, 2000.
- 3. Parker, R. Introduction to food Science, Delmer, Thomson Learning Co., Delma, 2000.

Web References

- https://www.futurelearn.com/info/courses/eating-while-enjoying-life/0/steps/75494
- 2. http://www.iea.usp.br/midiateca/apresentacao/singhbiofuels2.pdf
- 3. https://www.hsph.harvard.edu/nutritionsource/legumes-pulses/
- 4. https://www.heartuk.org.uk/low-cholesterol-foods/fats-and-oils
- 5. https://www.embibe.com/exams/spices-and-condiments/

* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

8								
COs	I	Program	Outco	Program Specific Outcomes (PSOs)				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	3	2	2	1	2	2	1	2
2	2	-	1	1	2	2	2	3
3	3	3	3	2	3	3	3	2
4	3	3	3	2	3	3	3	2
5	3	3	3	2	3	3	3	2

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Assessment Pattern as per Bloom's Taxonomy

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Test /	Remembering	Understanding	Applying	Analyzing	Evaluating	Creating	Total
Bloom's	(K1) %	(K2) %	(K3) %	(K4) %	(K5) %	(K6) %	%
Category*							
CAT1	10	20	70	-	-	-	100
CAT2	10	20	70	-	-	-	100
ESE	10	30	60	-	-	-	100
* ±3% may 1	be varied						

Evaluation Method

		Continu	ious Asse	essment Marks	(CAM)	End	
Assessment	CAT 1	CAT 2	Model Exam	Assignment*	Attendance	Semester Examination (ESE) Marks	Total Marks
Marks	1	0	5	5	5	75	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

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Department	Chem	istry				rition and Dietetics e: IDC *End Semester Exam Type:					
Semester	First		Course	Catego	ry Code	: IDC	*En	d Semest	er Exam T	ype: T l	
Course Code	A23C	HD102D	Perio	ds / W	eek	Cre	edit	Ma	ximum M	arks	
course coue	,,,250		L	Т	Р	(С	CAM	ESE	TM	
Course Name	BASIC	C CHEMISTRY FOR FOOD SCIENCE	4	0	0		4	25	75	100	
Prerequisite	Basic F	ood Chemistry									
rerequisite	Dusio i	Make the student to know all	hout the s	tructure	e of ato	m and	chemi	ical bondi	ng.		
Course		Learn the basic concepts of a					01101111				
Objectives		Study the underlying concept				vdrates	······································				
		 Understand the basic chemis 				,					
		 Understand the chemistry of 			ents.						
	On cor	mpletion of the course, the student							BT M	apping	
									(Highes		
Course								(3			
Outcome	come CO2 Obtain an insight into the concepts of acids, base and salts.						k	(3			
	CO3	Acquire underlying concepts of ch	nemistry o	f Carbo	hydrate	es			k	(3	
	CO4	Gain knowledge about the role of	Chemistr	y of Pro	tein				k	(3	
	CO5	Determine the physical and chemic	al propert	ies of fa	ats, plai	nt pigm	entsa	nd pectic	k	(3	
		substances									
Colloidal syst ype, properti	em in fo	dal System in Foods oods – meaning, types, properties bry of gel formation, factors influe bry Bases and Salts				Perio es, pro Perio	pertie	es: gels –	· meaning		
Colloidal systomy type, propertion UNIT-II General concep and Buffer solu	em in fo es, theo Acids ot of acid ition. Eq	pods – meaning, types, properties bry of gel formation, factors influe , Bases and Salts ds, bases and salts, conjugate acids a uivalent weight of acids bases and sa	ncing gel and bases,	format Classifi	cation o	Perio	pertie ds: 12 . Hydr	es: gels –	alts, pH,	CO	
type, propertion UNIT-II General concel and Buffer solu	em in fores, theo Acids of of acids ation. Eq	pods – meaning, types, properties bry of gel formation, factors influe , Bases and Salts ds, bases and salts, conjugate acids a	ncing gel and bases,	format Classifi	cation o	Perio	pertie ds: 12 . Hydro	es: gels – es: gels – elysis of s ors, Mola	alts, pH,	СО	
Colloidal systems, propertice wolf-II General concepand Buffer solution wolf-III Classification, mutarotation.	em in forces, theo Acids of of acids	pods – meaning, types, properties ory of gel formation, factors influent, Bases and Salts ds, bases and salts, conjugate acids a uivalent weight of acids bases and sa ormula solution.	ncing gel and bases, alts neutra	Classifi alization ccussion	cation.	Perio of salts, Base ir Perio n and ri	pertie ds: 12 . Hydro ndicato	es: gels —	alts, pH, r solution,	CO	
Colloidal systems, properties of States of Sta	em in for es, theo Acids of of acid ition. Eq n and For Chem Prepara Inter contarch, ce	pods – meaning, types, properties bry of gel formation, factors influent, Bases and Salts ds, bases and salts, conjugate acids a uivalent weight of acids bases and salts ormula solution. histry of Carbohydrate tion and reactions of glucose and fructors of glucose and vertices are vertices and vertices and vertices are vertices and vertices are vertices and vertices are vertices and vertices are vertice	ncing gel and bases, alts neutra	Classifi alization ccussion	cation.	Perio of salts, Base ir Perio n and ri	pertie ds: 12 Hydro ndicate ds: 12 ing str	es: gels — el olysis of s ors, Mola e cucture of	alts, pH, r solution,	СО	
Colloidal systems, propertice with type, propertice of State with type, with type, and the type, and type, a	em in forces, theo Acids of of acid ition. Eq n and Fo Chem Prepara Inter con tarch, ce	pods – meaning, types, properties bry of gel formation, factors influence, Bases and Salts ds, bases and salts, conjugate acids a uivalent weight of acids bases and salts ormula solution. histry of Carbohydrate tion and reactions of glucose and fruencesion of glucose to fructose and vellulose and derivatives of cellulose.	ncing gel and bases, alts neutra actose. Dis rice versa- pha amino classificati	Classifi alization ccussion propert	cation on Acid -	Perio Perio Perio Perio n and ri ucrose Perio	ds: 12 Hydrodicate ds: 12 ing str	es: gels —	alts, pH, r solution,	CC	
Colloidal system by pe, propertion of the propertion of the propertion of the properties of State of the preparation of the properties of	em in forces, theo Acids of of acid ition. Eq n and Fo Chem Prepara Inter con tarch, ce Chem assificati dipeptic	pods – meaning, types, properties bry of gel formation, factors influence, Bases and Salts ds, bases and salts, conjugate acids a uivalent weight of acids bases and salts ormula solution. histry of Carbohydrate tion and reactions of glucose and fructions of glucose to fructose and wellulose and derivatives of cellulose. histry of Proteins ion, preparation and properties of all de using Bergman method Proteins-	ncing gel and bases, alts neutra actose. Dis rice versa- pha amino classificati	Classifi alization ccussion propert	cation on Acid -	Perio Perio Perio Perio n and ri ucrose Perio	pertie ds: 12 Hydro ndicate ds: 12 ing str	es: gels —	alts, pH, r solution,	CCC	
Colloidal system by pe, properticular in the concept of the concep	em in forces, theo Acids of of	pods – meaning, types, properties bry of gel formation, factors influent, Bases and Salts ds, bases and salts, conjugate acids a uivalent weight of acids bases and salts ormula solution. histry of Carbohydrate tion and reactions of glucose and fructions of glucose and fructions of glucose and derivatives of cellulose. histry of Proteins ion, preparation and properties of all de using Bergman method Proteins-de shape-Nucleic acids-Elementary ions.	ncing gel and bases, alts neutra actose. Dis ice versa- pha amino classificati dea of DNA	Classifialization ccussion propert cacids- on accor A and Ri	cation on Acid -	Perio	pertied ds: 12 Hydrodicato ds: 1	es: gels —	alts, pH, r solution,	CCC	

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Text Books

- 1. Basic Principles of practical Chemistry Venkateswaran, Veerasamy&Kulandaivel, S.Chand& co.
- 2. ShakuntalaManay, Shadaksharaswamy. M (2000) Foods, Facts and Principles, New Age InternationalPvtLtd Publishers, 2nd Edition.
- 3. Chandrasekhar, U. Food Science and applications in Indian Cookery (2002) Phoenix Publishing House, New Delhi.
- 4. Swaminathan, M. Food Science, (2005) Chemistry and Experimental Foods, Bappco Publishers, Bangalore. Reference Books 1. Meyer, L.H, Food Chemistry, (2004) CBS Publishers and Distributors,4th edition 2. Paul, P.C. and Palmer, H.H. Food Theory and Applications (2000) JohnWiley and Sons, New York, (Revised Edition).
- 5. Chopra H.K, Panesar, P.S, Food Chemistry (2010) Narosa Publishing House, New Delhi.

Reference Books

- 1. Srilakshmi, B. Food Science, New Age International Publishers, New Delhi, 2010.
- 2. Brow, A., Understanding Food, Thomson Learning Publications, Wadsworth, 2000.
- 3. Parker, R. Introduction to food Science, Delmer, Thomson Learning Co., Delma, 2000.

Web References

- 1. https://medcraveonline.com/AOWMC/biochemical-functions-of-micronutrients.html
- 2. https://chem.libretexts.org/Courses/Brevard_College/CHE_301_Biochemistry/07%3A_Nutrition/7.0
 1%3A Nutr ients
- 3. https://www.sciencedirect.com/topics/chemistry/macronutrient

* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

COs	I	Program	Outco	mes (Po	Os)		pecific PSOs)	
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3
1	2	1	-	1	1	1	-	2
2	2	1	-	1	1	1	-	2
3	2	2	3	2	3	2	3	1
4	2	2	3	2	3	2	3	1
5	2	2	3	2	3	2	3	1

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Evaluation Method

		Continu	ious Asse	essment Marks	(CAM)	End	
Assessment	CAT 1	CAT 2	Model Exam	Assignment*	Attendance	Semester Examination (ESE) Marks	Total Marks
Marks	1	0	5	5	5	75	100

Minutes of the Fourth Meeting of Bosn (BISG Notition And Dietetics) ent beyond the syllabus

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Department	Food 9	Science	Programme: B.Sc Nutrition and Dietetics									
Semester	First		Course	Categor	y Code:	DSC *Er	d Semest	Semester Exam Type: Maximum Marks				
Course Code	A 22 NII	211010	Perio	ods / We	eek	Credit	Ma	ximum N	1arks			
Course Code	AZ3NI	DL101D	L	Т	Р	С	CAM	ESE	TM			
Course Name	FOOD	SCIENCE PRACTICAL	0	0	4	2	50	50	100			
Prerequisite	Cookin	g Methods and Functional Prop	erties of food	<u> </u>								
	To ena	able the students to										
	2. 3.	To use appropriate To study the factor pletion of the course, the stud	s influencing	the coo				ods. BT M	lapping			
Course	CO1	Identify suitable food groups	for developin	g produ	cts			· · · · · · · · · · · · · · · · · · ·	est Level) K3			
Outcome	CO2											
ı	CO3											
Experiments						Practicals -	· 30 hrs	<u>l</u>				

- 1. Familiarization with different kitchen gadgets.
- 2. Methods of measuring dry ingredients and liquids.
 - 3. Cereals and cereal cookery
 - Preparation of cereal products using Rice, Wheat, Ragi, Thinai, Samai, Varagu etc.
 - Experimental cookery on cereals.
 - 4. Pulse Cookery
 - Pulse based recipes
 - Experimental cookery

5. Vegetables and Fruits

- Effect of cooking on vegetables pigments.
- Preparation of vegetable curries, and fruits salad.

6.Milk Cookery

• Preparation of ice creams and milk Products

7.Egg Preparation of

- Scrambled egg.
- Poached egg
- Omelette and Experimental cookery.

Text Books

- 1. ShakuntalaManay, Shadaksharaswamy. M (2000) Foods, Facts and Principles, New Age InternationalPvt Ltd Publishers, 2nd Edition
- 2. Chandrasekhar, U. Food Science and applications in Indian Cookery (2002) Phoenix Publishing House, New DelhI

Reference Books

- 1.Hmacfie, (2007). Consumer led food Product Development, Weedhead publishing ltd., UK
- 2.Fuller, Gordon, W(2005). New Food Product Development, 2nd edition, CRC press, Boca, Raton, Florida,
- 3.Schaffner. D,J,Schroder, W.R.(2010). Food Marketing and International perspectives, web/ Mc Graw Hill Publication.

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https://www.foodresearchlab.com/what-we-do/new-product-development-service/new-food-product-development/
https://www.foodresearchlab.com/what-we-do/new-product-development-service/
https://www.sciencedirect.com/book/9781845697228/food-product-development
http://niftem-t.ac.in/food_product_development.php

* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

COs	I	Program	Outco	mes (Po	Os)	Program Specific Outcomes (PSOs)				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3		
1	2	2	2	-	3	3	2	3		
2	3	3	3	2	3	3	3	2		
3	3	3	3	2	3	3	3	2		
4	3	3	3	2	3	3	3	2		
5	3	3	3	2	3	3	3	2		

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Evaluation Method

Internal Assessment		Internal marks		ESE	TOTAL
internal Assessment	Model exam	Record	Attendance	MARKS	MARKS
Marks	30	10	10	50	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

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Department	Food	Science	Programme: B.Sc Nutrition and Dietetics								
Semester	First		Course	Categor	ry Code:	: DSC *Er	*End Semester Exam Typ				
Course Code	A22C	HI103D	Perio	ods / We	eek	Credit	Ma	ximum N	1arks		
Course Coue	AZSC	A23CHI102D	ESE	TM							
Course Name			0	0	4	2	50	50	100		
Prerequisite	Food (Chemistry									
rerequisite		able the students to									
Course Objectives	1. 2. 3. 4.	To identify the functiona To know the elements p To realize the nature of To visualize confirmato	oresent in aliphatic	the co	mpoun atic cor	ds npounds					
	On coi	mpletion of the course, the student	s will be a	ble to					lapping est Level)		
Course	CO1	Detect various functional groups	present	in an o	rganic	compound		К3			
Outcome	CO2	Understand about saturation a	unsaturation nature of compounds					К3			
	CO3	Identify aliphatic and aromatic co	ompound	S					К3		
	CO4	Visualize confirmatory tests of va	e confirmatory tests of various functional groups								
Experiments						Practicals -	- 30 hrs				

ORGANIC ANALYSIS

- 1. Preliminary tests
- 2. Detection of special Elements (N,S, Halogens)
- 3. To distinguish between aliphatic and aromatic compounds.
- 4. To distinguish between Saturated and unsaturated compounds.
- 5. Functional group tests for phenol, acids (mono, di) aromatic primary amine, aliphatic amide& Carbohydrate Glucose. Systematic analysis of organic compounds containing one functional group and characterization by confirmatory test.

Text Books

- 1. Rageeb Md. Usman, Dr.Sunila T, "Practical Hand Book of Systematic Organic Qualitative Analysis", Unicorn Publication Pvt. Ltd,1st Edition, 2015.
- 2. Israel Arthur Vogel, "Vogel's Textbook of Practical Organic Chemistry", Wiley Edition: 1st Edition, 1989.
- 3. Arthur Israel Vogel, "Elementary Practical Organic Chemistry" Prentice Hall Press; 3rd Edition, 1980.

Reference Books

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- 1. Venkateswaran. V, Veeraswmay. R, Kulandaivelu. A.R., "Basic Principles of Practical Chemistry", New Delhi, Sultan Chand and Sons.2nd Edition, 1997.
- 2. Mendham. J, Denney. R.C, Bames. J.D, and Thomas, M. "Vogel's Text book of QuantitativeAnalysis",Pearson Education,1st Edition,1989.
- 3. Gopalan.R, Subramaniam.P.S and Rengarajan.K, "Elements of Analytical Chemistry", Sultan Chandand Sons, 1st Edition, 2004.

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* TE – Theory Exam, LE – Lab Exam

COs/POs/PSOs Mapping

COs	F	Program	Outco	mes (P	Os)	Program Specific Outcomes (PSOs)				
	PO1	PO2	PO3	PO4	PO5	PSO1	PSO2	PSO3		
1	2	1	-	1	1	1	-	2		
2	2	1	-	1	1	1	-	2		
3	2	2	3	2	3	2	3	1		
4	2	2	3	2	3	2	3	1		
5	2	2	3	2	3	2	3	1		

Correlation Level: 1 - Low, 2 - Medium, 3 - High

Evaluation Method

Internal Assessment		Internal marks		ESE	TOTAL
mema Assessment	Model exam	Record	Attendance	MARKS	MARKS
Marks	30	10	10	50	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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	ENGLISH Programme: BSc.Nutrition and Dietetics Course Category Code: End Semester Exam Type							
Semester	FIRST	Course SEC	e Categ	ory Cod	e: End Se : -	mester	Exam T	ype
		Р	eriods /	' Week	Credit	М	aximun	n Mark
Course Code	A23ENSA02C	L	Т	Р	С	CAM	ESE	TM
Course Name	SOFT SKILLS	2	0	0	2	100	0	100
Prerequisite	Knowledge gained from Journal reading ar	nd Newspa	i aper rea	ading				
	To train students in Soft skills in order to en competent	able them	n to be ¡	professi	onally			
Course	To facilitate the students for Goal setting ar	nd Goal Ac	chieving	skills				
Objectives	To enrich the sense of social responsibility and accountability of the students							
To help the students to train them for Stress Management and Time Management						nent		
To train the students to work with team environment and Creative thinking								
	On completion of the course, the students will							apping st Level
	co1 enhance the Soft skills and compete p		ally				ŀ	(3
Course	co2 achieve Goal setting and Goal Achievi						ŀ	(3
Outcomes	co3 improve their social responsibility and	daccount	ability s	kills			К3	
	co4 enrich Stress Management and Time						ŀ	(3
	CO5 demonstrate the quality of a Team sh	ip and Cre	eative tl	hinking	T		ŀ	(3
UNIT-I	POSITIVE ATTITUDE				Periods			
	kills: Knowing Oneself/Self-Discovery - Confic		-	_	_	of Attit	ude -	
formation of att	itudes - psychological factors - the power of p							
					•			CO1
– developing po	sitive attitude - negative attitude – the cause				•			CO1
– developing po negative attitud	sitive attitude - negative attitude – the cause e - how to change negative attitude				ne conseq	uences		² CO1
– developing po negative attitud UNIT-II	sitive attitude - negative attitude — the cause e - how to change negative attitude GOAL SETTING	s of negat	ive attit	tude - th	ne conseq	uences :	of	COI
– developing po negative attitud UNIT-II Introduction - in people don't se	sitive attitude - negative attitude — the cause e - how to change negative attitude GOAL SETTING portance of goal setting - goal definition - ty goals - how to choose the right goals - SMAF	s of negat	ive attit	tude - th	Periods ly goal set	uences : 06 tting - w	of hy	CO2
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Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

T. favil

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- 5. https://www.lucidchart.com/blog/7-steps-to-creating-better-goals

COs/POs/PSOs Mapping

COs		Progra	m Outcome	utcomes (POs) Program Specific Outcome					
COS	PO 1	PO 2	PO 3	PO 4	PO 5	PSO 1	PSO 2	PSO 3	
1	1	3	3	1	1	1	3	3	
2	3	3	3	1	1	1	3	2	
3	3	3	3	1	2	1	3	3	
4	3	3	3	1	2	1	3	1	
5	3	3	3	1	3	1	3	3	

Correlation Level

High	Moderate	Low
3	2	1

Evaluation Method

		Cont	inuous Asse	ssment Marks (C	AM)	End Semester	Total Marks
Assessment	CAT 1	CAT 2	Model Exam	Assignment*	Attendance	Examination (ESE) Marks	
Marks	8	0	-	10	10	-	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

T. favil

_	Food Science	Programme: B.Sc Nutrition and Dietetics							
Semester	l	Course Category Code: AEC *End Semester Exam Typ					ype: T I		
Course Code	A23AETA01C	Perio	ds / We	eek	Credit		ximum Ma	arks	
		L	Т	Р	C	CAM	ESE	TM	
Course Name	Public Administration	2	0	0	1	100	0	100	
-	n to B.Sc, BCA, B.Com, BBA, BA Branches)								
Prerequisite	Knowledge about Administration								
	The main objectives of the course are	-							
	To introduce the elements of publi	c administra	ition						
Ca	To help the students obtain a suitable conceptual perspective of public administration								
Course Objectives	To introduce them the growth of in	nstitution dev	ices to	meet t	he need c	f changin	g times		
•	To instill and emphasize the need Administration	of ethical se	riousne	ess in c	ontempor	ary Indian	Public		
	On completion of the course, the stu	dents will be	able to)			BT Ma	pping	
	•						(Highes		
Course	CO1 Understand the concepts and e	volution of P	ublic Ac	lministr	ation.		K	2	
Outcome	CO2 Be aware of what is happening	in the Public	Admini	stration	in the cou	ntry.	К	K1	
	CO3 Explain the Territory Administration in the State and the Centre.						K	K2	
				tration			К	2	
	co4 Appreciate emerging issues in I	ndian Public <i>i</i>	Adminis	u ation.				3	
Meaning, nat Public Admi	INTRODUCTION TO PUBLIC ADMIture and Scope of Public Administration in a discipline — Wood	NISTRATIOn and its relation,	N ationsh , Henry	ip with / Fayol	Periods: 0 other disc , Max W	iplines- Ev 'eber and	olution of	:	
Meaning, nat Public Admi Evolution of	INTRODUCTION TO PUBLIC ADMIture and Scope of Public Administration nistration as a discipline — Wood Public Administration in India – Arthas	NISTRATIO n and its rela row Wilson, hastra – Colo	N ationsh , Henry	ip with / Fayol	Periods: 0 other disc , Max W ration upto	iplines- Ev 'eber and o 1947	olution of	:	
Public Admi Evolution of	INTRODUCTION TO PUBLIC ADMIture and Scope of Public Administration in instration as a discipline — Wood Public Administration in India – Arthas PUBLIC ADMINISTRATION IN INDI	NISTRATIO n and its rela row Wilson, hastra – Colo	N ationsh , Henry onial Ac	ip with / Fayol dministr	Periods: 0 other disc , Max W ration upto Periods: 0	iplines- Ev eber and 1947	olution of others -	CO	
Meaning, nat Public Admi Evolution of UNIT-II Enactment of Services – Tr	INTRODUCTION TO PUBLIC ADMIture and Scope of Public Administration nistration as a discipline — Wood Public Administration in India – Arthas	NISTRATIOn and its relation willson, whastra — Color IA In ment — The rog — Statuto	oN ationsh , Henry onial Ac e Cabin ry Bodi	ip with y Fayol dministr et — Ce es: The	Periods: 0 other disc , Max W ration upto Periods: 0 entral Sec Central Vi	iplines- Ev reber and o 1947 08 retariat	olution of others -	CO	
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- 3. RumkiBasu, "Public Administration: Concept and Theories", Sterling, 1st Edition, 2013.

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- 2. M. Laxmikanth, "Public Administration", McGraw Hill Education, 1st Edition, 2011.
- 3. R.B.Jain, "Public Administration in India, 21st Century Challenges for Good Governance", Deep and Deep Publications, 2002.

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- 3. http://rti.gov.in/
- 4. http://www.cvc.nic.in/

Evaluation Method

		ESE	TOTAL		
Marks Distribution	CAT I & CAT II	Report	Attendance	MARKS	MARKS
Distribution	70	20	10	-	100

^{*} Application oriented / Problem solving / Design / Analytical in content beyond the syllabus

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^{*} TE – Theory Exam, LE – Lab Exam

A23XXCXXXD	CERTIFICATION COURSES	L	Т	Р	С	Hrs
		0	0	4	0	40

Students shall choose an International certification course offered by the reputed organizations like Google, Microsoft, Information Technology Specialist, Project Management Institute, Adobe, CISCO Networking Academy, AWS Academy, Tally and Autodesk, Eplan, etc. The duration of the course is 40 hours specified in the curriculum, which will be offered through Centre of Excellence.

Pass /Fail will be determined on the basis of participation, attendance, performance and completion of the course.

If a candidate Fails, he/she has to repeat the course in the subsequent years. Pass in this course is mandatory for the award of degree.

Minutes of the Fourth Meeting of BoS (B.Sc. Nutrition and Dietetics)

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