	GANPAT UNIVERSITY															
	FACULTY OF SCIENCE															
				TEA	CHIN	IG AN	D EXAN	MINAT	ION	SCHE	ME					
Prog	ram	B.Sc. – Food Technology	Branch	Food	Techno	ology		Semes	ter	II		Version	1.0.0.0			
Effe	ctive from	2018-19	Effective f	or batcl	nes adm	nitted o	nwards	2018-1	9							
S.	Subject	Subject Name	Theory /				Teaching	g Schem	e				Exam	ination Schem	ie	
N	Code		Practical		С	redit			Hours	Per Wee	ek	Theory	Marks	Practical Marks		Total
				Th	Tu	Pr	Total	Th	Tu	Pr	Total	Internal	ES	CE SE	ES	Marks
1	BFT201	Food and Nutrition	Theory /	3	1	2	6	3	1	4	8	40	60	40	60	200
			Practical													
2	BFT202	Chemistry of Food	Theory /	3	1	2	6	3	1	4	8	40	60	40	60	200
			Practical													
3	BFT203	Food Microbiology	Theory /	3	1	2	6	3	1	4	8	40	60	40	60	200
			Practical													
4	BFT204	Communications Skill	Theory	3	-	-	3	3	-	-	3	40	60	-	-	100
		Total		12	3	6	21	12	3	12	27	160	240	120	180	700

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	ctive from			ear	2018-1			Effective for the batches Admitted onwards June 201														
	ect code	BFT	201		Subject				Food and Nutrition													
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		Th	Tu	Pr	Total		arks	CE	SE	ES	Total	Duration	SE	ES								
Hour		3	1	4	8		neory	20	20	60	100	Theory	1 hr.	3 hr.								
													4 hr.									
	Pre-requisites Pre-requisites																					
Nil																						
Scop	cope and Objectives:																					
1	To develop the basic knowledge in the area of human nutrition.																					
2	To approof of indivi		he rela	ations	hip betw	een	food, r	nutrien	ts func	tion ar	nd contri	bution of nut	trients to healt	:h								
3	To make	e best ı	ise of a	availa	ble nutri	ients	s in ord	er to fu	ull fill t	he req	uiremen	ts of balance	d diet for the									
	consume	ers.																				
4	To famil		the stu	idents	about th	ne n	utrition	al dail	y requi	remen	ts of var	ous age grou	ups as per									
Lagr	ning Out																					
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nutri		iowiec	ige abo	out III	c 1000 al	iiu II	iuuIIIOI	anu f		ci tile	various	Cins icialiv	c to rood and									
		Class	ificati	on m	etabolice	n (linical	manif	actation	os of A	aficianos	and avegage	of various nut	ringto								
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prod		arrequ	meme	iii Cai	Culation	s an	u evalu	ate nu	ment n	сотр	anomne	s retated to fi	iumem dencie	ency of								
		nt trini	o of n		t mi ah mm	o du	ata at at	m o 11 . o o		h avita	hla laha	ling and mad	Ironina									
			es of fi	utrien	it fich pr	oau	cts at si	nan sc	ale wit	n suita	Prepare different types of nutrient rich products at small scale with suitable labeling and packaging											
	Syllabus- Theory																					
Unit														Hrc								
Unit		ction						Conte	ent					Hrs								
Unit 1	Introdu		e and	impoi	rtance of	nut	rition:			zarions	e terme u	sed in food s	and nutrition	Hrs 2								
	Introdu Scope, c	oncept						definit	ion of v		s terms u	sed in food a	and nutrition,	_								
	Introdu Scope, c Understa	oncept anding	relatio					definit	ion of v		s terms u	sed in food a	and nutrition,	2								
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4 Laboratory and Anthropometry Qualitative and quantitative test, anthropometry assessment and its importance. Nutritional Labeling Importance, global trends, codex guidelines, nutritional labeling in India, FSSAI guidelines. Syllabus-Practical I Identification of food sources for various nutrients using food composition tables. Record diet of self using 24 hour dietary recall and its nutritional analysis. Introduction to meal planning, concept of food exchange system. Planning of meals for adults of different activity levels for various income groups. Planning of nutritious snacks for different age and income groups. Planning of nutritious snacks using various methods of cooking. Nutritional labeling of food products. Estimation of BMI and other nutritional status parameters. Planning a diet using "Food Composition Tables" (ICMR). Standardization of low calorie food. Diet planning using "Food Exchange" method. Standardization of protein rich food. Colorimetric analysis of carbohydrates(Anthrone test). Estimation of total nitrogen in food. Estimation of total nitrogen in food. Estimation of calcium, phosphorous, iron and ascorbic acid in food. Text books Bamji MS, Krishnaswamy K, Brahmam GNV. Textbook of Human Nutrition, 3rd Edition. Oxford and IBH Publishing Co. Pvt. Ltd. 2009. Srilakshmi. Food Science, 4th Edition. New Age International Ltd, 2007. Wardlaw MG, Paul M Insel Mosby. Perspectives in Nutrition, 3rd Edition, 1996 Codex Guidelines on Nutrition Labeling (CAC/GL 2_1985) (Rev.1_1993). Rome, Food and Agriculture Organisation of the United Nations' World Health Organisation, 1993. Food Safety and Standards Authority of India portal, Government of India. Gopalan, C. NIN, ICMR. Nutritive Value of Indian Foods. 1990. Seth V, Singh K. Diet planning through the Life Cycle: Part I. Normal Nutrition. A Practical Manual, Fourth edition, Elite Publishing House Pvt Ltd. 2005.		Types of Dietary assessment, Methods of diet survey, Analysis and interpretation, problems in diet survey and solutions.	
Qualitative and quantitative test, anthropometry assessment and its importance. Nutritional Labeling Importance, global trends, codex guidelines, nutritional labeling in India, FSSAI guidelines. Syllabus-Practical Identification of food sources for various nutrients using food composition tables. Record diet of self using 24 hour dietary recall and its nutritional analysis. Introduction to meal planning, concept of food exchange system. Planning of meals for adults of different activity levels for various income groups. Planning of nutritious snacks for different age and income groups. Preperation of nutritious snacks for different age and income groups. Preperation of nutritious snacks using various methods of cooking. Nutritional labeling of food products. Estimation of BMI and other nutritional status parameters. Planning a diet using "Food Composition Tables" (ICMR). Standardization of low calorie food. Diet planning using "Food Exchange" method. Standardization of protein rich food. Colorimetric analysis of carbohydrates(Anthrone test). Estimation of total nitrogen in food. Estimation of total nitrogen in food. Estimation of calcium, phosphorous, iron and ascorbic acid in food. Text books Bamji MS, Krishnaswamy K, Brahmam GNV. Textbook of Human Nutrition, 3rd Edition. Oxford and IBH Publishing Co. Pvt. Ltd. 2009. Srilakshmi. Food Science, 4th Edition. New Age International Ltd, 2007. Wardlaw MG, Paul M Insel Mosby. Perspectives in Nutrition, 3rd Edition, 1996 Codex Guidelines on Nutrition Labeling (CAC/GL 2_1985) (Rev.1_1993). Rome, Food and Agriculture Organisation of the United Nations / World Health Organisation, 1993. Food Safety and Standards Authority of India portal, Government of India. Gopalan, C. NIN, ICMR. Nutritive Value of Indian Foods. 1990. Seth V, Singh K. Diet planning through the Life Cycle: Part I. Normal Nutrition. A Practical Manual, Fourth edition, Elite Publishing House Pvt Ltd. 2005 Gibney et al (ed.), Introduction to Human Nutrition, Blackwell Publishers, 2005.			
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9 Khanna K, Gupta S, Seth R, Mahna R, Rekhi T. The Art and Science of Cooking: A Practical Manual, Revised Edition. Elite Publishing House Pvt Ltd., 2004			
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	New product development	4								
	Definition, Importance, Need of product development, Steps of product development-									
	Product development tools Reasons for failure.									
Syllab	yllabus Practical									
1	Determination of boiling point and freezing point of water.									
2	Estimation of sugars.									
3	Stages of sugar cookery.									
4	Estimation of gluten content.									
5	Estimation of polyphenols.									
6	Determination of acidity.									
7	Determination of natural pigments in foods.									
8	Determination of gelatinization.									
9	Fat acidity in foods-flour.									
10	Determination of refractive index of fats.	•	-							
11	Determination of carotenoids w.r.t flour pigments.	•								

Text books

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13

14 15 Estimation of total ash.

Estimation of minerals -demo

1	Atlas, R.M. (1998) Microbiology: Fundamental and applications. 2nd edition, Macmillan Publishing
	Company, New York.
2	Pelezar, M.J., Chan, E.G.S. and Krieg, N.R. (1998) Microbiology
3	Heritage, J., Evance, E.G.V. and Killington, R.A. (1999) Microbiology inaction. Cambridge
	University Press.
4	Frazier William C and Westhoff, Dennis C. Food Microbiology, TMH, New Delhi, 2004.
5	Garbutt, John. Essentials of Food Microbiology, Arnold, London, 1997.

Determination of thermal inactivation time of enzymes in fruits and vegetables. Introduction of the concept of new product development.

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Progra	m	B.Sc	. – Fc	od Te	chnolog	y	Branc	h/Spe	c.		Fo	od Tecl	nnology		
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Effecti	ve from	Acade	emic `	Year	2018-1	9	Effec	tive fo	r the ba	tches	s A	dmitte	d onwards	June 2018	
Subjec	t code	BFT	203		Subject	t Na	ıme	Food	l Micro	biolo	ogy				
Teachi	ng scher	ne				Ex	aminat	ion scl	neme						
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Credit		3	1	2	6	Pr	actical	20	20	60)	100	Practical	4 hr.	4 hr.
Pre-re	Pre-requisites														
Nil															
Scope and Objectives:															
To understand the role and significance of microbes of different categories, microbial inactivation and												and			
enviro	nmental											C			
Learni	ing Out	come:													
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	Isolation													/	
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	To study simple staining of bacteria. To conduct Gram's staining of bacteria and differentiate between Gram +ve and Gram –ve bacteria.														
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9	Microbial analysis of cereals and cereal products such as wheat flour and biscuit.
10	Microbial analysis of spices (Red chilies and coarinder).
11	Detection of presence of E. Coli and Coliform bacteria by rapid high coliform test.
12	Detection of presence of coliforms in water by MPN method.
13	Studies on bacterial growth curve.
14	Estimation of total microbial count of: surrounding air, workers and fruits and vegetables.
15	To study various sub culturing techniques.
Text	books
1	Frazier William C and Westhoff, Dennis C. Food Microbiology, TMH, New Delhi, 2004.
2	Jay, James M. Modern Food Microbiology, CBS Publication, New Delhi, 2000.
3	Garbutt, John. Essentials of Food Microbiology, Arnold, London, 1997.
4	Pelczar MJ, Chan E.C.S and Krieg, Noel R. Microbiology, 5th Ed., TMH, New Delhi, 1993.

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	equisites														
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