

LALIT NARAYAN MITHILA UNIVERSITY KAMESHWARNAGAR, DARBHANGA

Annexure-3

1.1.3 Number of Courses/Paper having focus on Employability/Entrepreneurship/Skill development in the Curriculum. Name of the Program:

SI. No.	Name of the Course/Paper	Course/Paper code	Activities/Courses with Direct bearing on Employability/Entrepreneurship/Skill Development	Year of Introduction (During the last Five Year)
		Energy Metabolism CC-01 Unit-1	The course explain energy metabolism, energy requirement for individual (working or non working man and woman), measurement and affecting factor, use, need and importance of energy. Get an insight into various metabolic pathways.	2018-19
1	Advanced Nutrition	Protein CC-01 Unit-2	The course describes the concept of protein structure, function, use; explain the structure and function of DNA, RNA, Plasma Protein.	2018-19
		Lipids CC-01 Unit-3	The course describes the Lipids classification function & its nutritional significance of lipids, Biosynthesis of Cholesterol.	2018-19
		Carbohydrates CC-01 Unit-4	The course explains the structure, function of saccharides, use and equipments of carbohydrates, and know the role of hormones in growth, maintenance and regulation of body processes.	2018-19



		Micronutrients CC-01 Unit-5	The course describes the classification, role of vitamins and minerals. Effect and use of micronutrients. Importance of micro minerals.	2018-19
		Introduction to Development CC-02 Unit-1	The course describes the overview of development from prenatal stage to preadolescence stage stages and principles of growth and development, role of environment and heredity.	2018-19
	Advanced Study of Human	Prenatal Development CC-02 Unit-2	The course describes the prenatal Development of every stage, common disorder during pregnancy and birth process.	2018-19
2	Development	Infancy (0-2 years) CC-02 Unit -3	The course explains the 0-2year infant behaviour, health and evaluation.	2018-19
		Early Childhood (2-6 years) CC-02 Unit-4	The course explains the all types of Development in early childhood (2-6year). Develop an awareness of important aspects of all development stages during this phase.	2018-19
		Later Childhood (6-12 years) CC-02 Unit-5	The course describe the late childhood (6-12 year) develop an awareness of important aspects of all development stages during this phase.	2018-19



		Concept of Home Management CC-03 Unit-1	The course explains the concept related to family resource management. It highlights the significance of management process in efficient use of resources.	2018-19
		Management Process CC-03 Unit-2	it imparts the skills of efficient management of available resources. It prepares the students for organising events.	2018-19
3	Concept of Home Management	Ergonomics CC-03 Unit-3	It focuses on management of human energy as a family resource. It imparts knowledge regarding good work practices to perform the work effectively and reduce discomforts while performing domestic and other occupations.	2018-19
		Time and Energy Management CC-03 Unit-4	Understanding the importance of time and energy and ways to manage them effectively for performing the work effectively.	2018-19
		Work Simplification CC-03 Unit-5	Understanding the importance of time and energy and ways and suggests the ways for simplifying the work.	2018-19
4	Research Methodology & Statistics	Fundamentals of Research CC-04 Unit-1	Develop a scientific approach and know the processes of research. The competence for selecting method and tools appropriate for research topics.	2018-19



			Understand concepts of statistical methods.	
		Stages/steps involved in research process CC-04 Unit-2	Understand a scientific approach and know the different steps of research.	2018-19
		Sample and sampling techniques CC-04 Unit-3	Understand concepts of different types of sampling techniques.	2018-19
		Research Tools CC-04 Unit-4	Understand concepts of different types of Research Tools.	2018-19
		Concept of Data CC-04 Unit-5	Understand concepts of different types of statistical methods.	2018-19
5	Therapeutic Nutrition	CC-05 Unit-1	Create awareness related to nutrition & its importance in various body conditions.	2018-19
		CC-05 Unit-2	Helps in understanding the disease condition and effective management of infectious diseases.	2018-19



		CC-05 Unit-3	Helps in understanding the nutrition related diseases. Helps in understanding the effect of food on internal body organs.	2018-19
		CC-05 Unit-4	It generates knowledge related to metabolic disorders and suggests ways for preventing its occurrence.	2018-19
		CC-05 Unit-5	It practically makes the learner to understand the concept of dietary counselling. It prepares the students to perform dietary counselling for various health conditions.	2018-19
		CC-06 Unit-1	The course explains understand physiological changes during pregnancy, nutritional effect on mother - child health, nutrition requirement during pregnancy, stage of fatal growth.	2018-19
6	Maternal and Infant Nutrition	CC-06 Unit-2	The course explains understand physiological changes during lactation. Role of Hormones, Milk composition, importance of Breast feeding.	2018-19
		CC-06 Unit-3	The course describe get acquainted with: growth and development changes from conception till birth.	2018-19
		CC-06 Unit-4	The course explain after pregnancy nutritional requirement and sign and symptoms of menopause.	2018-19



		CC-06 Unit-5	The course explains I Understand the intei" relationship between nutrition and growth and development during a life cycle, policies and programmes for mother and child health.	2018-19
7	Management of Textile Crafts and apparel industry	Study of Textile crafts of India: History, Production canters, Techniques, Designs, Colours and products. CC-07 Unit-1	Acquaint with Indian textile and clothing culture. Analyze traditional textiles based on the process of making it. Differentiates traditional textiles from different parts of the country. Appreciates the traditional textiles and costumes. Understands the techniques of traditional embroidery.	2018-19
		Elements used in creating a design CC-07 Unit-2	Imparts the basic knowledge of Textile designing.	2018-19
		Principles of Merchandizing CC-07 Unit-3	Develops entrepreneurial skills for effective marketing of developed products. Learners will be able to know about different kinds of marketing and merchandising techniques. Learners will be able to understand various selling techniques.	2018-19
		Role of Mass Media in fashion CC-07 Unit-4	Student understands working relationship between fashion and social media both locally and globally.	2018-19



		Cultural and Economic Empowerment through Textile Crafts CC-07 Unit-5	Learners will develop understanding about ancient and contemporary costumes and textiles of India.	2018-19
		Concept of Communication CC-08 Unit-1	Develop understanding regarding various aspects of communication. Develop understanding regarding various audio-visual aids used for various groups: individual, group, mass. Develop ability to prepare, operate use of audio-visual aids.	2018-19
8	Communication Technology	Forms of communication CC-08 Unit-2	Develop understanding regarding various types of communication.	2018-19
		Types of Media CC-08 Unit-3	Develop understanding regarding various audiovisual aids used for various groups: individual, group, mass.	2018-19
		Adoption & Diffusion CC-08 Unit-4	Develop understanding regarding concept of Adoption & Diffusion Process.	2018-19
		Introduction to Information Communication CC-08 Unit-5	Develop understanding regarding various types of communication & Role of ICT in development.	2018-19
9	Women's Studies	CC-09 Unit-1	The course explains women in India civilization in every edges and period.	2018-19



		CC-09 Unit-2	The course explains the woman education, sources and growth.	2018-19
		Personal and Civil Laws related to women CC-09 Unit-3	The course describes the crime against Woman, Women Exploitation in India & difficulty related to female child.	2018-19
		Personal and Civil Laws related to women CC-09 Unit-4	The course explains the personal and civil laws related to woman Exploitation Act and IPC.	2018-19
		CC-09 Unit-5	The course explains women empowerment programmes.	2018-19
10		CC-10 Unit-1	The course describe related to food spoilage, role of micro-organisms, use of importance of food preservation.	2018-19
10	Food Processing	CC-10 Unit-2	The course explains food processing, methods and importance of food preservation. Gain basic knowledge about food processing and technology.	2018-19
		CC-10 Unit-3	The course explains the basic principal of food product development, importance of food packaging, evaluation of food testing, techniques of packaging, fermentation technology.	2018-19



		CC-10 Unit-4	The course explains the steps of packaging technique, nutritional value of food, principle and importance of labelling.	2018-19
		CC-10 Unit-5	The course explains the understand food standard and related laws, flavouring agents antioxidants, emulsifying agents.	2018-19
		Introduction to Food Science CC-11 Unit-1	The course explains the acquire knowledge regarding food groups/science and properties.	2018-19
		Carbohydrates in Foods CC-11 Unit-2	The course describes carbohydrates processed food product use in cooking.	2018-19
11	Food Science and Experimental Food	Protein Cookery CC-11 Unit-3	The course explain gain knowledge regarding cooking methods applied for specific food items protein food product, effect of heat on available protein food item and it's nutritional value.	2018-19
		Vegetables and Fruits CC-11 Unit-4	The course explains cooking and nutritional value of vegetables and fruits, preservation and effect of heat on vegetables and fruits.	2018-19
		Nuts, Oilseeds and Beverages CC-11 Unit-5	The course explains uses of oilseeds, nuts in cookery, gain knowledge, different types of alcoholic and non-alcoholic beverages.	2018-19



		Introduction to Food Service CC-12 Unit-1	Provide practical field level experience in food administration. Equip the students to have knowledge about various food service systems impart. Knowledge of quantity cookery and quality control in food administration.	2018-19
12	Institutional Food Management	Food Service System meaning and Management Planning CC-12 Unit-2	Provide practical field level experience in food administration. Equip the students to have knowledge about various food service systems impart. Knowledge of quantity cookery and quality control	2018-19
		Organisation and steps in organising CC-12 Unit-3	in food administration. Equip the students to have knowledge about various food service systems impart. Knowledge of quantity cookery and quality control in food administration.	2018-19
		Management of Social Institute CC-12 Unit-4	Develop understanding regarding management of Social Institute.	2018-19
		Food Hygiene and Sanitation CC-12 Unit-5	Develop understanding regarding Food Hygiene and Sanitation.	2018-19



		Concept of Public Nutrition CC-13 Unit-1	Define the concept of public health nutrition. Discuss the challengers and scope of public health nutrition in India. It also suggests the ways to manage nutrition related problems.	2018-19
12		Assessment of Nutritional Status CC-13 Unit-2	Assess nutritional status of community and develop necessary intervention.	2018-19
13	Community Nutrition	Nutrition Education CC-13 Unit-3	Select and use appropriate modes of communication to obtained share evidence based Public Health Nutrition Knowledge.	2018-19
		National and International agencies involved in women and child welfare CC-13 Unit-4	Generates awareness about national and international agencies providing nutrition programmes.	2018-19
		Primary Health Care of the Community CC-13 Unit-5	Improvements in the health of individual and community by knowing the levels of health care delivery system at different levels of community.	2018-19
14	Practical Approach to writing Research Activities	Writing for Grants and Aid EC-1 Unit-1	Learners would be capable of writing and presenting the research proposals for getting projects of national and international levels.	2018-19
		Different forms of Research Writing EC-1 Unit-2	Learners would be capable of writing research related articles and reports of any form.	2018-19



		Power point presentation of anyone from Unit 1 & 2	Imparts skill and confidence of presenting article/topics.	2018-19
15	Internship/Dissertation/Project/Seminar	Internship/Dissertation/Project/Seminar (EC-2)	Learners apply their acquired skills in practical situation for better learning. The course explains the steps of research writing/dissertation.	2018-19



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Srci. Sarpir Kumar OSI) (Verversities) Roj Bhowan, Palta

Sub: Implementation of Choice Based Credit System

Sir,

Lith reference to your letter No. BSU (Legulation)20/2018-1510/GIS(!), alt. 05.06.2018, a onceting of the
fand of expeals in Home Science was held today
(13.06.2018) at 10.30 am to finalise the CBCS burdilum
in Home Science.
Le went through the syllabors provided to us. Le
found that the syllabors was in order. However,
two additional sheets added as come pages.

he accommend that it may be placed before the authorised body.

yours sincetely,

Aby See Nes Com

13.06.2018

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Dept. & Home Science

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Core Course (CC):

A course which should compulsorily be studied by a candidate as a core requirement on the basis of subject of MA studies and is termed as a Core course.

Elective Course (EC):

Generally a course which can be chosen from a pool of courses (Basket) and which may be very specific or specialized or advanced or supportive to the subject/discipline of study or which provides an extended scope or which enables an exposure to some other subject/discipline/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

Discipline Specific Elective Course (DSE):

Elective courses may be offered by the main discipline/subject of study is referred to as **Discipline Specific Elective**. The University/Institute may also offer discipline related Elective courses of interdisciplinary nature (to be offered by main discipline/subject of study).

Generic Elective (GE) Course:

An elective course chosen generally from an unrelated discipline/subject, with an intention to seek exposure is called a Generic Elective.

P.S.: A core course offered in a discipline/subject may be treated as an elective by other discipline/subject and *vice versa* and such electives may also be referred to as Generic Elective.

Ability Enhancement Courses (AEC):

The Ability Enhancement Courses (AEC) / Skill Enhancement Courses (SEC). "AEC" courses are the courses based upon the content that leads to life skill enhancement.

Ability Enhancement Compulsory Courses (AECC): (Qualifying and Non-CGPA course):

University will run a number of Ability Enhancement Compulsory Courses (AECC) which is qualifying in nature and student from all faculties have to qualify in all courses.

Dissertation/Project/ Internship/ Industrial Training:

An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher / faculty member is called dissertation/project.

13.06.2018

Bimla Sin Le 13.06.2018

Description of papers for MA degree in Home Science (Faculty of Social Sciences) under CBCS

SEMESTER	Course/ Paper Code	Nature of Course/ Paper	Marks	Marks of CIA	Marks of ESE	Passing criterion	Qualifying Criterion
	MHOMCC- 1	Advanced Nutrition	100	30	70	45% in CIA 45% in ESE	Marks decid class/ CGPA
SEMESTER I	MHOMCC-2	Advanced Study of Human Development	100	30	70	45% in CIA 45% in ESE	Marks decid
	мномсс-з	Concept of Home Management	100	30	70	45% in CIA 45% in ESE	Marks decid
	мномсс-4	Research Methodology and Statistics	100	30	70	45% in CIA 45% in ESE	Marks decid class/ CGPA
	MHOMAECC-1	Environmental Sustainability & Swachcha Bharat Abhiyan Activities	100	50	50	45% in CIA 45% in ESE	Qualifying
	MHOMCC-5 (DSE for other departments)	Therapeutic Nutrition	100	30	70	45% in CIA 45% in ESE	Marks decid class/ CGPA
SEMESTER II	MHOMCC-6	Maternal and Infant Nutrition	100	30	70	45% in CIA 45% in ESE	Marks decid class/ CGPA
	MHOMCC-7	Management of Textile Crafts and Apparel Industry	100	30	70	45% in CIA 45% in ESE	Marks decid class/ CGPA
	MHOMCC-8	Communication Technology	100	30	70	45% in ClA 45% in ESE	Marks decid class/ CGPA
	MHOMCC-9	Women's Studies	100	30	70	45% in CIA 45% in ESE	Marks decid
	MHOMAEC-I	Computers & IT Skill	100	50	50	45% in CIA 45% in ESE	Qualifying
SEMESTER III	MHOMCC-10	Food Processing	100	30	70	45% in CIA 45% in ESE	Marks decid
	MHOMCC-11	Food Science and Experimental Food	100	30	70	45% in CIA 45% in ESE	Marks decid
	MHOMCC-12	Institutional Food Management	100	30	70	45% in CIA 45% in ESE	Marks decid
	M <mark>HOMCC-</mark> 13	Community Nutrition	100	30	70	45% in CIA 45% in ESE	Marks decid
	MHOMCC-14	Practical	100	30	70	45% in CIA 45% in ESE	Marks decid
	MHOMAECC-2	Human Values & Professional Ethics & Gender Sensitization	100	50	50	45% in CIA 45% in ESE	Qualifying
RIV	MHOMEC-1	Practical Approach to Writing Research Activities	100	Will be decided by the BOCS	Will be decided by the BOCS	45% in CIA 45% in ESE	Marks decid class/ CGPA
SEMESTER IV	MHOMEC-2	Internship/Dissertation/ Project/Seminar	100	Will be decided by the BOS	Will be decided by the BOS	45% in CIA 45% in ESE	Marks decid class/ CGPA
SEM	MHOMDSE	Opt a course from other Department	100	30	70	45% in CtA 45% in ESE	Qualifying

13.06.2018

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3.1.1 Core Course (CC):

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3.1.2. Elective Course (EC):

Generally a course which can be chosen from a pool of courses (Basket) and which may be very specific or specialized or advanced or supportive to the subject/discipline of study or which provides an extended scope or which enables an exposure to some other subject/discipline/domain or nurtures the candidate's proficiency/skill is called an Elective Course.

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The Ability Enhancement Courses (AEC) / Skill Enhancement Courses (SEC). "AEC" courses are the courses based upon the content that leads to life skill enhancement.

3.1.6 Ability Enhancement Compulsory Courses (AECC): (Qualifying and Non-CGPA course):

University will run a number of Ability Enhancement Compulsory Courses (AECC) which is qualifying in nature and student from all faculties have to qualify in all courses.

3.1.7 Dissertation/Project/ Internship/ Industrial Training:

An elective course designed to acquire special/advanced knowledge, such as supplement study/support study to a project work, and a candidate studies such a course on his own with an advisory support by a teacher / faculty member is called dissertation/project.

13.06.2018

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Dr. Anju Srivastava Associate Professor & Head, PG Department of Home Science, Patna University, Patna



07.05.2018

To.

The Registrar

Patna University,

Patna

Subject: Revised Curriculum for Postgraduate course in Home Science under Choice Based Credit System - Submission

Respected Sir,

We are hereby submitting the revised Curriculum for Postgraduate course in Home Science under Choice Based Credit System prepared by us.

Thanking you,

Yours sincerely,

(Anju Srivastava)

Enclosed: .

- 1). Proceeding of the meeting
- 2]. Two copies of revised curriculum for Postgraduate Course in Home science under Choice based Credit System

DR 50.00

Department of Home Science Patna University, Patna



A meeting regarding revision of curriculum under Choice Based Credit System for Post Graduate course in Home Science was held today i.e. 07.05.2018 (Monday) at 10.30 a.m. in the Post Graduate Department of Home Science, Patna University under the chairmanship of Dr. Anju Srivastava, Head, Post Graduate Department of Home Science, Patna University.

The following members were present in the meeting:

\$. No.	Members of the Syllabus Committee	Signature
01	Dr. Anju Srivastava Head, PG Department of Home Science Patna University, Patna	14h Tenes and
02	Prof. (Dr.) Renu Kumari Head, PG Department of Home Science B.R.A. Bihar University, Muzaffarpur	Renu Kumari 718/2018
03	Dr. Manju Kumari Sinha Head, PG Department of Home Science J.P. University, Chapra	Manyu Humani Sinha.
04	Dr. Nirmala Jha Head, PG Department of Home Science L.N.M.U. Darbhanga	Nirmela The 07.05.2018
05	Dr. Anju Singh Head, PG Department of Home Science T.M.B.U., Bhagalpur	Anju Singh 07-05-2018
06	Dr. Vijay Lakshmi Head, PG Department of Home Science V.K.S.U, Ara	V. Lakolmi 07.05.2018

The members of the Syllabus Committee, after thorough discussion, approved the attached revised curriculum for Post Graduate course in Home Science under Choice Based Credit System.

Proposed Syllabus for M.A. in Home Science

	(00)	(BC)	Elective Course	Course (GE)	Course	Compulsory Course (AECC)
-	CC - 1 Advanced Nutrition	*				AECC - 1 Environmental Sustainability & Swachcha Bharat Abhlyan Activities
	CC - 2 Child Development: Prenatal to Preadolescence		11			
	CC - 3 Concept of Home Management				15	
	CC – 4 Research Methodology and Statistics					
61	CC - 5 Therapeutic Nutrition (DSE for other departments)				AEC - 1 Computers & IT Skill	
	CC - 6 Maternal and Infant Nutrition					
	CC - 7 Management of Textile Crafts and Apparel Industry				- *	
	CC – 8 Communication Technology					
	CC - 9 Women's Studies					
60	CC - 10 Food Processing					AECC - 2 Human Values & Professional Ethics & Gender Sensitization
	CC-11 Food Science and Experimental Food					-
	CC - 12 Institutional Food Management CC - 13					
	Community Nutrition CC - 14 Practical					
4		EC - 1 Practical Approach to Writing Research Activities		GE - 1 Human Rights		
		EC - 2 Internship/Dissertation/ Project/Seminar				
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8.8° La 20.2018

Semester-1

Course Opted	Course Name	1	Cr	edits
CC -1 (Core Course)	Advanced Nutrition		5	(5+0)
CC - 2 (Core Course)	Child Development: Prenata Preadolescence	al to	5	(5+0)
CC - 3 (Core Course)	Concept of Home Manageme	o <mark>n</mark> t	5	(5+0)
CC - 4 (Core Course)	Research Methodology and	Statistics	5	(5+0)
AECC - 1 (Ability Enhancement Compulsory Course)	Environmental Sustainabili Swachchha Bharat Abhiyan	_	5	(5+0)
		Total	25	

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Semester - I

Core Course 1:

Advanced Nutrition

05 Credits

r a	
Full Marks: 70	Time: 3 Hours
The pattern of question papers will be as unde Group A- Compulsory – ten questions (two questions from each unit	
Group B- Five questions (one from each unit) – each question of 5 m	
Group C- Five questions (one from each unit) – each question of 10 t	marks, three to be answered. $10 \times 3 = 20 \text{ marks}$
Objectives:	
This course will enable the students to:	**/
Understand the impact of nutrients on human body	
Get an insight into various metabolic pathways	
\square Know the role of hormones in growth, maintenance and re	egulation of body processes
Unit I	
Energy Metabolism	
 Determination of energy value of food- Bomb calorimeter 	•
Basal metabolic rate- Measurement and factors affecting	
Measurement of energy requirement of an individual with	h reference to man and women
Unit II	
Proteins	
Classification of protein & amino acids	
Structure, properties and functions of protein	
Metabolism of proteins, protein synthesis	
Assessment of protein quality	
☐ Plasma proteins	
Structure and Functions of DNA and RNA	
Unit III	
Lipids	
Classification of Lipids	
Structure, properties and functions of Lipids	
☐ Metabolism and nutritional significance of lipids	
☐ Biosynthesis of cholesterol and its functions	
Unit IV	
Carbohydrates	
□ Classification of carbohydrates	٨
Structure, properties and functions of carbohydrates	
☐ Metabolism of carbohydrates	44
☐ Altered metabolism of carbohydrates in diabetics	13.06.2018
Glycemic index	a Cinte
☐ Role of hormones in carbohydrate metabolism (insulin, th	yroid and adrenal cortex)
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Unit V

Micronutrients

Vitamins and Minerals and their role in metabolism (vitamin A, Calcium, Iron and Iodine)

Reference:

- 1. M. Swaminathan: Advance text book on Food and Nutrition Vol. II
- 2. Paul and R., Elen T. Ross: Nutrition
- 3. A.C. Deb: Fundamentals of Biochemistry
- 4. H.S. Srivastava: Elements of Biochemistry
- 5. A.K. Bery: Few Rasayan ki Pathya Pshtika

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Core Course 2:

Child Development: Prenatal to Preadolescence

05 Credits

Full Marks: 70	Time: 3 Hours
The pattern of question papers will be as under Group A- Compulsory – ten question s (two questions from each unit)	of two marks each. $2 \times 10 = 20$ marks
Group B- Five questions (one from each unit) – each question of 5 ma	rks, four to be answered. $5 \times 4 = 20 \text{ marks}$
Group C- Five questions (one from each unit) – each question of 10 m	
Objectives:	
This course will enable the students to: To have an overview of development from prenatal stage to To develop an awareness of important aspects of all development	preadolescence stage ent stages during this phase
Unit I	
Introduction to Development ☐ Stages and principles of growth and development ☐ Developmental tasks ☐ Individual differences	
☐ Comparative role of heredity and environment ☐ Aspects of development	
Unit II	
Prenatal Development Conception, stages of prenatal development	
Factors affecting prenatal development	
☐ Common disorders during pregnancy	
☐ Types and stages of birth process	
Unit III Infancy (0-2 years)	
☐ Neonate-Their characteristics and behavior patterns	
 Evaluation and examination of health of neonate Formation of some healthy and good habits among Infants 	
Unit IV	
Early Childhood (2-6 years) ☐ Physical and motor development, common motor skills ☐ Social and Emotional development (characteristics and con ☐ Cognitive development	mmon Emotions)
Unit V	
Late childhood (6-12 years)	
☐ Physical and motor development ☐ Personality development- characteristics	
☐ Imagination and cognitive development	John Co
Social relationship- peer, siblings and parents	1 Sont

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References:

1. Rice, F.P (1995). Human Development, New Jersey: Prentice Hall

2. Santrock, J.W. & Yussen, S.R. (1988). Child Development: An Introduction Lowa: Wm.C Brown Publishers

3. Cole, M. & Cole, S. (1993). The Development of Children (2nd Ed) New York: scientific American Books Freeman & Co.

Renu Kumari Anju singli 07/5/18

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Core Course 3:

Concept of Home Management

05 Credits

Full Marks: 70	Time: 3 Hours
The pattern of question papers will be as under Group A- Compulsory – ten questions (two questions from each unit)	of two marks each. 2 x 10 = 20 marks
Group B- Five questions (one from each unit) – each question of 5 ma	trks, four to be answered. $5 \times 4 = 20 \text{ marks}$
Group C- Five questions (one from each unit) – each question of 10 m	tarks, three to be answered. $10 \times 3 = 20 \text{ marks}$
Objectives: This course will enable the students: To understand the significance of management in the micro at To know the conceptual, human and scientific aspects of management in the micro at To develop the ability to evaluate the managerial efficiency and other organizations	nagement functions
Unit I Management as a system Definition Elements Types Application in family resource management	
Unit II Management process Planning – objectives, principles, strategies, policies Organizing – purpose, process, delegation, authority, responsitating, purpose, recruitment, appraisal directing, leaders communication Controlling and its tools Appraisal Evaluation	
Unit III Ergonomics	

Definition

Time and energy management

Time and energy management in study of ergonomics

Scope and nature of ergonomics in domestic and other occupations

Unit V

Work simplification

Work simplification process and time motion economy

April 5/18 April 5/18 07/5/18
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Reference:

- 1. Introduction hot Home Management by Bettye B. Swanson, Macmillan Publishing Company
- 2. Home Today & Tomorrow by Ruth F. Sherwood
- 3. The House its plan and use by Tersie Agan M.S. Oxford & IBH Publishing House
- 4. Management for Modern families by Gross Grandall, Knoll Prentice Hall, International INC, Englewood, New Jersey
- 5. Grih Prabanth by Manju Patni
- Grih Prabandh and Grih Vyavastha by Brinda Singh

Renu Kumari 07/5/18

Renu Kumari 07/5/18

Nirmala Tha. H. W- Sinhur 7.5.18

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Core Course 4:

Research Methodology and Statistics

05 Credits

Full Marks: 70

Time: 3 Hours

The pattern of question papers will be as under

Group A- Compulsory – ten questions (two questions from each unit) of two marks each.

 $2 \times 10 = 20 \text{ marks}$

Group B- Five questions (one from each unit) - each question of 5 marks, four to be answered.

 $5 \times 4 = 20 \text{ marks}$

Group C- Five questions (one from each unit) - each question of 10 marks, three to be answered.

 $10 \times 3 = 20 \text{ marks}$

Objectives:

This course will enable the students to:

 Develop a scientific approach and know the processes of research Develop the competence for selecting method and tools appropriate for research topics Understand concepts of statistical measures of central tendency, dispersion variability and probability

Unit I

Foundation of Scientific Research

- Research meaning and definition.
- Need of research in Home Science
- Necessary consideration for selecting a research problem
- Sources for locating a research problem

Unit II

Stages/steps involved in research process

- Research problem
- ☐ Literature Review
- Hypothesis
- Variables
- Methodology: sample, sampling technique, tools and tests, statistical devices
- Pilot study
- Test administration and data collection
- Scientific generalization
- Preparing the research report

Unit III

Sample and Sampling techniques

- Sample- Meaning, characteristics of a good/scientific sample
- Sampling techniques:
 - Probability sampling- Meaning and types
 - Non-probability sampling- Meaning and types

Unit IV

Research Tools

- Observation
- Ouestionnaire
- Interview
- Case study

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Unit V

Concept of data

- a. Types of data Primary data and secondary data

 Qualitative and quantitative data
- b. Analysis of data Qualitative and quantitative data analysis

Reference:

- Bell, J (1997): Doing Your Research Project: A Guide for First-time Researchers in
 Research process Education and Social Science, Viva Books, New Delhi
- 2. Bell, J (1997): How to Complete Your Research Project Successfully: A Guide for First time Researchers, UBSPD, New Delhi
- Bulmer, M.C. (1984): Sociological Research Methods An Introduction, Macmillan, HongKong
- 4. Festinger, L. and Katz, D. (ed.) (1977): Research Methods in the Behavioral Sciences, Amerind Publishing, New Delhi
- 5. Holloway, I. (1997): Basic Concepts of Qualitative Research, Blackwell Science, London.
- 6. Jain, G. (1998): Research Methodology: Method and Techniques, Mangal Deep, Jaipur
- 7. Kothari, C.R. (2000): Research Methodology: Method and Techniques, Wishwa Prakashan, New Delhi
- 8. Kumar, A. (1997): Social Research Method (The Art of Scientifics Investigation), Anmol Publication, New Delhi
- 9. Kumar, A. (2000): Research Methodology in Social Sciences, Sarup and Sons, New Delhi.
- 10. Mc Burney, D.H. (2001): Research Methodology, Thomson-Wadsworth, Australia
- 11. Pande, G.C. (1999): Research Methodology in Social Science, Anmol Publication, NewDelhi

Statistics

Unit I

Meaning and characteristics of statistics, definition, importance, classification, tabulation, frequency curve, histogram and pie chart

Unit II

Measure of central tendency

- Mean definition, merits, demerits and related programs
- Median definition, merits, demerits and related program
- ☐ Mode definition, merits, demerits and related program

Unit III

 Measure of dispersion- meaning and types of dispersion, range, quartile deviation, standard deviation related problems, characteristics of dispersion

Unit IV

Correlation - definition, methods of correlation, product moment (Pearson) and rank difference

Unit V

Normal probability curve- definition and characteristics of normal probability curve, definition, types of skewness and kutosis

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Reference:

1. GUPTA, S. (2001) Research Methodology and Statistical Techniques, Deep and Deep, New Delhi, 510p.

2. HOODA, R.P. (2003) Statistics for Business and Economics, 3rd ed., Macmillan

India Ltd. Delhi, 855p.

3. DEY, B.R. (2005) "Textbook of Managerial Statistics", Macmillan India Ltd. Delhi,

4. Fleming, M.C. & Nellis, Joseph G. (1997) "The Essence of Statistics for

Business", Prentice-Hall of India, New Delhi, 270p.

5. Sarma, K.V.S. (2001) "Statistics made simple: Do it yourself on PC", Prentice-Hall, New Delhi, 257p.

6. Chakroborty, S.R. & Giri, N. (1997) "Basic Statistic". South Asian pub,. New Delhi, 271p.

7. Das, M.N. (1989) "Statistical Methods and Concepts,", New Age, New Delhi, 256p.

8. Elhance, D.N. (2000) "Fundamentals of Statistics [containing more than 750 solved and 1250 problems for review exercise]", Kitab Mahal, Allahabad, 1523p.

9. Goon, A. & Gupta, M & DASGUPTA, B. (2001) "Fundamentals of Statistics", Vol.1 &II. The World Press, Calcutta, 150p.

10. Gupta, S.P. (1996) "Practical Statistics", 37th ed. S, Chand, New Delhi, 563p.

- 11. Gupta, S.C (2000) "Fundamentals of Statistics", Himalaya Pub,. Mumbai, 1343p.
- 12. Gupta S.P. (2000) "Statistics Methods", Sultan Chand & Sons, New Delhi, 1428p.
- 13. Gupta C.B. & Gupta, V. (1973) "An Introduction to Statistical Methods", Vikas publishing house pvt. Ltd. New Delhi, 829p.

14. Nagar, A.L. & Das, R.K. (1997) "Basic Statistics", 2nd ed. OUP, Delhi, 424p.

15. Shenoy, G.V. & Pant, M. (2006)" Statistics Methods in Business and Social Science", Macmillan India Ltd., Delhi, 288p.

16. Spiegel, Murray R. (1998) "Schaum's Outline of Theory and Problems of Statistics", 3rd ed. Tata McGraw-Hall Pub,. New Delhi, 538p.

17. Triola, Mario F. (1998) "Elementary Statistics", 7th ed. Addison Wesley Longman, America, 804p.

18. Richard A. (1992) 'Applied Multivariate Statistics Analysis", Prentice-Hall, New Delhi, 642p.

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Semester - II

Course Opted	Course Name	Credits
CC - 5 (Core Course) (Discipline Specific Elective Course for other departments)	Therapeutic Nutrition	5 (5+0)
CC – 6 (Core Course)	Maternal and Infant Nutrition	5 (5+0)
CC – 7 (Core Course)	Communication Technology	5 (5+0)
CC – 8 (Core Course)	Women's Studies	5 (5+0)
CC – 9 (Core Course)	Management of Textile Crafts and Apparel Industry	5 (5+0)
AEC - I (Ability Enhancement Course)	Computers & IT Skill	5 (5+0)
	Total	30

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Semester - II

Core Course: 5

Therapeutic Nutrition

05 Credits

Time: 3 Hours Full Marks: 70 The pattern of question papers will be as under Group A- Compulsory – ten questions (two questions from each unit) of two marks each. $2 \times 10 = 20 \text{ marks}$ Group B- Five questions (one from each unit) - each question of 5 marks, four to be answered. $5 \times 4 = 20 \text{ marks}$ Group C- Five questions (one from each unit) - each question of 10 marks, three to be answered. $10 \times 3 = 20 \text{ marks}$ Objectives: This course will enable the students to: Understand the etiology, physiologic and metabolic anomalies of acute and chronic diseases and patient needs. Acquire basic knowledge about the effects of various diseases on nutritional status and dietary requirements. Be able to provide required nutritional care and treatment of the various diseases Unit I ☐ Importance of nutrition in health and disease Importance of meal planning, factors to be considered while planning meal Dietary management in weight imbalance (obesity and underweight) Unit II Prevalence, etiology, biochemical and clinical manifestations therapeutic and measurement of the following: ☐ Typhoid fever □ Tuberculosis HIV infection and AIDS Unit III Prevalence, etiology, biochemical and clinical manifestations and therapeutic measurements of the following: Nutritional anemia ☐ Liver disorders: Jaundice, Hepatitis ☐ Diseases of the Cardio Vascular System ☐ Kidney diseases Types, causes, symptoms and dietary management of metabolic disorders ☐ Diabetes Mellitus □ Gout □ Cancer Unit V

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Dietary counseling: Needs, objectives, steps and techniques

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Practical

- D Preparation of therapeutic diets clear liquid diet, full fluid, soft and normal diet
- □ Plan and prepare diet for the diseases covered in theory and calculate the nutrients requirement
- ☐ Plan a day's meal and calculate nutrients requirement for following diseases:
 - Weight Imbalance
 - Fever
 - Liver disease
 - Cardio vascular Disease (500mg and 1000mg sodium restricted diet)
 - Renal disorders
 - Metabolic disorder

References:

- 1. M. Swaminathan, Advanced Textbook on Food and Nutrition
- 2. R. C. Mishra, Health and Nutrition Education
- 3- vkgkj ,oa iks"k.k foKkua & MkWDVj c`ank flag
- 4. P. Jnaki Rao, Nutrition and Food Science
- Shubhangini M. Joshi, Nutrition and Dietetics
- 6. B. Shrilaxmi: Dietetics, 4th Edition
- 7. F.P. Anita & Philip Abraham: Clinical Dietetics & Nutrition, 4th Edition
- 8. Carrol Lutz and Karen Przytulski: Nutrition and Diet Therapy

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Core Course 6

Maternal and Infant Nutrition

05 Credits

Full Marks: 70	Time: 3 Hours
The pattern of question papers will be as under Group A- Compulsory – ten question s (two questions from each unit) Group B- Five questions (one from each unit) – each question of 5 ma	of two marks each. $2 \times 10 = 20 \text{ marks}$
Group C- Five questions (one from each unit) - each question of 10 m	
Objectives: This course will enable the students be Understand physiological changes during pregnancy and la Get acquainted with growth and developmental changes fro Understand the inter-relationship between nutrition and get a life cycle	om conception till birth.
 Unit I Important of Maternal nutrition prior to and during pregnation on mother-child health, including pregnancy Physiology and endocrinology of pregnancy and embryonic and development Nutritional requirement during pregnancy Complications of pregnancy and management and importantisk mothers Congenital malformation, fetal alcohol syndrome and gestal 	and fetal growth ance of antenatal care of at –
Unit II Lactation Development of mammary tissue and role of hormones Human milk composition and factors affecting breast feeding fertility Management of lactation -breast feeding, Rooming - sore nipples, engorged breast, inverted nipples etc.	
Unit III Care and management of the preterm and LBW infants Implications for feeding and management	
Unit IV ☐ Menopause ☐ Sign and symptoms ☐ Problems ☐ Management of dietary needs and health Unit V ☐ Policies and programmes for promotion maternal and child	13.06.2018 13.06 2018 I nutrition and health

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References:

- 1. M. Swaminathann: Food and Nutrition
- 2. vkgkj ,oa iks"k.k foKkua & MkWDVj c`ank flag
- 3. vks0ih0 VaMu & ekuo 'kjhj jpuk ,oa fdz;k foKkua
- 4. vkgkj "oa iks"k.k foKkua & MkWDVj Vhuk [kuwtk
- 5. Health Mathers: Archana Sinha
- 6. Nutrition and Child Development: 4th Edition, KE Elizabeth

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Core Course:7

Communication Technology

05 Credits

Full Marks: 70

Time: 3 Hours

The pattern of question papers will be as under

Group A- Compulsory – ten questions (two questions from each unit) of two marks each.

 $2 \times 10 = 20 \text{ marks}$

Group B- Five questions (one from each unit) – each question of 5 marks, four to be answered.

 $5 \times 4 = 20 \text{ marks}$

Group C- Five questions (one from each unit) – each question of 10 marks, three to be answered.

 $10 \times 3 = 20 \text{ marks}$

Objective:

Develop understanding regarding various aspects of communication.

Develop understanding regarding various audio-visual aids used for various groups: individual, group, mass.

Develop ability to prepare, operate use of various audio-visual aids.

Unit I

Concept of Communication

- Definition, meaning and nature of communication
- Process, elements and models of communication
- Barriers in communication

Unit II

Forms of Communication

- Verbal and non-verbal
- Intra, inter, group, mass

Unit III

Mass Media

- Types, roles and characteristics
- Uses of Electronic and traditional media

Unit IV

Adoption and Diffusion

- Concept of adoption
- Innovation and diffusion
- The Adoption process
- The Innovation -Decision process
- Adopter categories

Unit V

Introduction to Information Communication Technology (ICT)

- Satellite broadcasting, electronic media and computer Technology
- Role of ICT in Extension work and development

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References:

- 1. Dale (1964), Audio-visual Methods of Teaching, Holt, Rinhart and Wintson, London.
- 2. Brown et al (1983), A.V. Instruction Technology, Media and Methods, 6th Edition, Mc Graw Hill Book Co. New York.
- 3. Joshi Uma (1997), Text book of Mass Communication and Media, Anmol Publications, New Delhi.
- 4. Joshi Uma (2001), Understanding Development Communications: Domincent Publishers, New Delhi.
- 5. Sandhu Anoop Singh(1996), Extension Prorgramme Planning, Oxford and JBH

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Core Course 8:

Full Marks: 70

Women's Studies

05 Credits

Time: 3 Hours

The pattern of question papers will be as under
Group A- Compulsory – ten question s (two questions from each unit) of two marks each.
$2 \times 10 = 20 \text{ mark}$
Group B- Five questions (one from each unit) – each question of 5 marks, four to be answered.
$5 \times 4 = 20 \text{ mark}$
Group C- Five questions (one from each unit) - each question of 10 marks, three to be answered.
$10 \times 3 = 20 \text{ mark}$
Objectives: To develop awareness regarding status of women in India and sensitivity of

Objectives:
To develop awareness regarding status of women in India and sensitivity of women's issues and concerns
☐ To enable women to become champions/ well equipped in the changing society
☐ To empower women in their struggle against inequality and gender bias
☐ To become aware of the comprehensive and balanced understanding of social reality
Unit I
Women in India Civilization down the ages, Status of Women in ancient India-Vedic age, Pauranic Period, Mauryan Period, Gupta, Medieval, Feudal Period, Buddhist Period, British Period, Women in Post-independence period

Unit II

Relevance of Women's Studies Sources and growth of Women's Studies

Unit III

Issues related to Crime against Women in India

- ☐ Child marriage
- Female feticide
- Dowry
- Sati
- Honor killing
- Rape and Sex abuse
- Trafficking
- Domestic Violence

Unit IV

Personal and Civil Laws related to Women

- □ Dowry prohibition Act.
- ☐ Divorce and maintenance Law
- ☐ Marriage Registration Act
- ☐ Domestic Violence Act 2005
- Pre-Natal Diagnostic Act
- Laws against feticides
- ☐ Medical Termination of Pregnancy (MTP) Act, 1971
- Immoral Traffic Prevention Act
- ☐ Indecent Representation of Women (Prohibition) Act 1986
- Law against Sexual Harassment at workplace

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Unit V

Women's Welfare Programme

Reference:

- 1. Asthana P. (1974), Women's Movement in India, Vikas Delhi
- 2, Antony M.J. (1985), Womens Rights: Dialogue, New Delhi
- 3. Okim S.M. (1989), Justice, Gender and Family, Basic Book, New York
- 4. Pant N. (1995), Status of Girl Child and Women in India, Delhi, APH
- 5. Girl Child in india Devasia Leelamma
- 6. Srivastava T.N. (1985), Women & Law" Intellectual, New Delhi
- Baker H.A. Berheide, G.W. and Others (Eds), 1980, Wome Today: A Multidisciplinary Approach to Women's Studies, Books/Cole Publications
- Desai N. & Patel. V., Indian Women: Change and Challenges in the International Decade: Popular Prakashan, Bombay
- Gupta, N.K. & Sudan I.K. (1990), Women at work in Developing Economy, Amol, New Delhi
- 10. Parashar, A(1992), Women and Family Law reforms in India: Uniform Civil Code and Gender Equality, Sage Publications, New Delhi
- 11. Namita Agrawal, Women and law, New Century Publication, New Delhi
- Vianellow M. & Siemienska R. (1990), Gender Inequality: A Comprehensive Study of Discrimination and Participation, Sage Publications, London
- 13. Sharma U. (1989), Brides are not for burning: Dowry Victims in India, Radiant, New Delhi

14. Women in a Changing Society by S.K. Ghosh

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Core Course: 9 Management of Textile Crafts and Apparel industry **5** Credits Time: 3 Hours Full Marks: 70 The pattern of question papers will be as under Group A- Compulsory – ten questions (two questions from each unit) of two marks each. $2 \times 10 = 20 \text{ marks}$ Group B- Five questions (one from each unit) – each question of 5 marks, four to be answered. $5 \times 4 = 20 \text{ marks}$ Group C- Five questions (one from each unit) - each question of 10 marks, three to be answered. $10 \times 3 = 20 \text{ marks}$ Objectives: This course will enable the students: To understand the textile crafts of India. To enhance awareness regarding the history and production centers of the traditional textile crafts of India To understand the aspects of management regarding designing, merchandising and mass media To highlight certain aspects of apparel industry To signify the role of traditional textile crafts in economic empowerment Study of Textile Crafts of India: history, production centers, techniques, designs, colors and products Woven textile of India- Banaras Brocades, Jandanis and Baluchars of Bengal, Kani Shawls of Kashmir Embroidered textiles of India- Kantha of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chickankari of Utta: Pradesh, Kashida of Kashmir Painted and Printed textiles of India- Kalamkari of Andhra Pradesh, Dabu printing of Rajasthan, Ajarakh prints of Gujrat Dyed textiles of India- Bandhanis of Rajasthan and Gujrat, Ikats-Patola of Gujrat, Bandhas of Orissa, Pochampalli of Andhra Pradesh Unit II Elements used in creating a design Color- Color harmony, its sensitivity and composition in dress Motif development-Geographical, simplified, naturalized, stylized, abstract and ornamental Components of fashion-Silhouette, details, color, fabric, texture Unit III Principles of Merchandising Types of merchandising Role of retailing in merchandising Usual Merchandising- Plan & Schedules, Types of display, Elements of display Unit IV Role of Mass Media in Fashion Role of Mass Media in promoting fashion

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Impact of Mass Media on fashion

Unit V

Cultural and Economic Empowerment through Textile Crafts

- Textile crafts in National economy
- Evolution and socio-economic significance of Khadi, Handloom and Handicraft sector
- Sustenance of traditional textile crafts
- Interventions by organizations

Reference:

- 1. J. Anderson Black, Muidge Garland, A History of Fashion, Orbis Publishing Ltd., London
- 2. Broucher Francois, A History of Costume in the West, Thames and Hudson.
- 3. Sharon Lee Tete, Inside Fashion Design, Harper and Row Publishers, New York.
- 4. Kathryn Samuel, Life Styles, Fashion Styles, Orbis Publishing Ltd. London.
- 5. Carter E. (1977), The Changing World of Fashion, G.P. Putnam's Sons, New York.
- 6. Carr H.and Pomery J. (1992), Fashion Design and Product Development, Blackwell Scientific Publications, London, Edinerg.
- Complete guide to Sewing. Reader's Digest Association, New York.

8. Creative Clothing Construction, McGRAW Hill, 1973

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Semester- III

Course Opted	Course Name	Credits
CC – 10 (Core Course)	Food Processing	5 (5+0)
CC - 11 (Core Course)	Food Science and Experimental Food	5 (5+0)
CC - 12 (Core Course)	Institutional Food Management	5 (5+0)
CC – 13 (Core Course)	Community Nutrition	5 (5+0)
CC - 14 (Core Course)	Practical	5 (0+5)
AECC - 2 (Ability Enhancement Compulsory Course)	Human Values & Professional Ethics & Gender Sensitization	5 (5+0)
	Total	30

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Semester - III

Core Course 10:

Food Processing

05 Credits

Full Marks: 70

Time: 3 Hours

The pattern of question papers will be as under

Group A- Compulsory - ten questions (two questions from each unit) of two marks each.

 $2 \times 10 = 20 \text{ marks}$

Group B- Five questions (one from each unit) - each question of 5 marks, four to be answered.

 $5 \times 4 = 20 \text{ marks}$

Group C- Five questions (one from each unit) - each question of 10 marks, three to be answered.

 $10 \times 3 = 20 \text{ marks}$

Objectives:

This course will enable the students be

- ☐ Acquire necessary knowledge of basic principles and procedures in the production of important food products
- Gain basic knowledge about food processing and technology.
- Understand food standard and related laws

☐ Food spoilage, role of microorganisms, food borne hazards of microbial origin

Food preservation - principles & methods Physical principles in undertaking food processing operation including thermal processing, ionizing radiation, refrigeration freezing and dehydration, Mineral processing

Unit III

Basic principles at food product developments need and types of food Extruded foods- merit, demerits and use of Extruded foods Organic Foods, Processing and packaging of Organic Foods and programme for production Product evaluation techniques censoring evaluation and product testing Fermentation technology - fermentation, enrichment and fortification

Unit IV

Packaging technique - packaging materials, types of packaging effects of packaging on nutritive value of foods, latest trends in packaging Food labeling - definition, principles of labeling, nutrition labeling - research and testing

Unit V

Food standards and laws

Food additives, food color, flavoring agents, preservative, and antioxidants, emulsifying agents, and stabilizing agents

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References:

- 1. Food processing and bioactive compounds Y. S. Reddy
- 2. Food preservation and processing Kalia Manoranjan Sood Sangita
- 3. Food Technology Processing and Laboratory Control F. Aylword
- 4. Food Preservation and Processing Kalin M

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05 Credits Food Science and Experimental Food Core Course 11: Time: 3 Hours Full Marks: 70 The pattern of question papers will be as under Group A- Compulsory – ten questions (two questions from each unit) of two marks each. $2 \times 10 = 20 \text{ marks}$ Group B- Five questions (one from each unit) – each question of 5 marks, four to be answered. $5 \times 4 = 20 \text{ marks}$ Group C- Five questions (one from each unit) – each question of 10 marks, three to be answered. $10 \times 3 = 20 \text{ marks}$ Objectives: To acquire knowledge regarding food groups To gain knowledge regarding cooking methods applied for specific food items Unit I Introduction to food science: Aims and objectives of the study of food science Food acceptability by variation in color, flavor and texture Physiochemical properties of food Unit II Carbohydrates in foods Sugar - Sources, properties and uses, stages of sugar cookery Starch – Sources, properties and uses, processed cereal products Unit III Protein cookery Pulses – composition, methods of cooking, germination and fermentation Meat – structure, common types, changes occurring during cooking of meat Fish - types, characteristics of fresh fish, cooking and preservation Egg – structure, methods of cooking, uses of egg in different preparations Milk – composition, effect of heat on milk, uses in cookery Unit IV Vegetables and fruits Classification, composition, color/pigments, effects of cooking on vegetables Fruits-Classification, composition, effect of heat and methods of preservation Unit V Nuts, oilseeds and beverages ☐ Nuts and oilseeds – composition and uses in cookery Beverages and appetizers- coffee, tea, fruit beverages and alcoholic beverages, milk based beverages, carbonated, non-alcoholic beverages and alcoholic beverages

References:

1. Charley H. (1982), Food Science, 2nd Edition, John Wiley and Sons, New York

2. Potten N and Flotch Kiss. JH (1996), Food Science, 5th Edition, CBS, Publishers and Distributors, New Delhi

3. Food Chemistry and Experimental Foods by M.Swaminathan, Ganesh & Co., Madras

4. Sri Laxmi (2005), Food Science, 3rd Edition, New Age International Publisher

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Core Course 12:

Institutional Food Management

05 Credits

Full Marks: 70

Time: 3 Hours

The pattern of question papers will be as under Group A- Compulsory – ten questions (two questions from each unit) o	f two marks each.
Group B- Five questions (one from each unit) – each question of 5 mar	
Group C- Five questions (one from each unit) – each question of 10 ma	$5 \times 4 = 20 \text{ marks}$ arks, three to be answered. $10 \times 3 = 20 \text{ marks}$
Objectives: This course is designed to: Provide practical field level experience in food administration Equip the students to have knowledge about various food serving knowledge of quantity cookery and quality control in food administration	ice systems Impart
Unit I	
Introduction to Food Service	
Food service system and their development	
☐ An introduction to Food Service Industry	
Unit II	
Food Service System Planning and Management Planning Strategies in planning Kitchen layout planning Pricing of product Organization and Management Management Theories Tools of management Personnel management	
☐ Organization and steps in organizing	
Unit III Food production Menu planning Food purchase Cost control Quantity Food production Standardization of recipes Service Management	
☐ Delivery and service of foods in different systems	
Unit IV Management of Social Institutes - family as an institutes, coinstitutions	child care and geriatric
Unit V	
Food Hygiene and Sanitation	1
Sanitation and safety in food services	13.06.2018
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References:	-11006.20

1. West & Wood "Food service in Institutions - Johu Wiley & Sons, 1977

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3. Mohini Seth, Institutional Food Management, New Age International Publishers

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Core Course 13:

Community Nutrition

05 Credits

Full Marks: 70
The pattern of question papers will be as under Group A- Compulsory – ten question s (two questions from each unit) of two marks each.
$2 \times 10 = 20$ marks Group B- Five questions (one from each unit) – each question of 5 marks, four to be answered.
$5 \times 4 = 20$ marks Group C- Five questions (one from each unit) – each question of 10 marks, three to be answered. $10 \times 3 = 20$ marks
Objectives: Equip the community/ public to have knowledge about various nutritional problems and their prevention Understand the causes and consequences of nutrition problem in society Acquire basic knowledge about various approaches to nutrition and health programmes Gain basic knowledge about food consumed by the community To assess nutritional status of the community
Unit I ☐ Concept of Public Nutrition, relationship between health and nutrition ☐ Nutritional problem's prevalent in India and measures to combat them ☐ Bone health problems and dietary management
Unit II Assessment of nutritional status Direct – Anthropometric, clinical and Biochemical Indirect – Vital Static diet survey
Unit III Nutrition Education – objectives, planning, evaluation of nutrition education programme Selection of effective nutrition education method
Unit IV National and international agencies involved in women and child welfare □ National agencies – ICDS, ICMR, ICAR and NIPCCD

Unit V

Primary health care of the community - National health care delivery system, Indicators of Health

References:

- 1. vkgkj ,oa iks"k.k foKkua & MkWDVj izfeyk oekZ] MkWDVj dkjfr ik.Ms;
- 2. ekRdyk ,oa f'k'kq dY;k.k & MkWDVj c'ank flag

□ International agencies – WHO, FAO, UNICEF

- 3. O;kogkfjd vkgkj foKkua ,oa vkgkj fpfdRlk & xhrk iq"i 'kkg] tk;ql 'khyk 'kkW
- 4. Child Nutrition & Primary Education: Surendra Nath Mishra, Maharanjan Behera
- 5. vkgkj ,oa iks"k.k & ae LokehUkFku A

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Core Course 14:	Practical	05 Credits
Full Marks: 70		Time: 3 Hours
Group A- Compulsory – ten questions (one Group C- Five questions (one Core Corse: 10 Physical principles in from Sanitation and Waste of Packaging – Latest trend Food labeling – Definition	tern of question papers will be as under uestions (two questions from each unit) of from each unit) — each question of 5 marks from each unit) — each question of 10 miles from each unit) — each question of 10 miles from each unit) — each question of 10 miles from each unit) — each question of 10 miles from each unit) — each question of 10 miles from each unit) — each question of 10 miles from Processing from Processing from Processing from Processing from processing — Chemical chandisposal distribution and manabon, principles, nutritional labeling, from each unit) — each question of 10 miles from each unit) — each question of 10 m	2 x 10 = 20 marks rks, four to be answered. 5 x 4 = 20 marks arks, three to be answered. 10 x 3 = 20 marks ges in food that affect texture, agement. ood standards and laws.
Core Corse: 11	Food Science and Experime	ntal Food
gulab jamun Study of changes occuroast and minced meat Effect of soaking and grams sattu-litti and k Use of different method to minimize losses	r, stages of sugar cookery, preparring during cooking of meat, fish fried and steamed fish, poached eg germination- preparation of dish theer is of cooking vegetables and their earts - factors affecting ice crystal for	and egg Preparation of meat g, omllets, moonaise es from soaked germinated effect on nutrients, steps
Core Corse:12	Institutional Food Managen	nent
☐ Running and managing ☐ Quantity cookery – stan ☐ Visit to various food ser	_	
Core Corse:13	Community Nutrition	
adolescents, Pregnant a ☐ Planning of cyclic menu ☐ Survey: Dietary surveys	t recipes for infants, preschoolers, e and lactating mothers. is for <i>balwadi</i> /nursery school, mid- and assessment of nutritional state blic health nutrition programmes	day snack/school lunch.
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Semester- IV

Course Opted	Course Name	Credits
EC - 1 (Elective Course)	Practical Approach to Writing Research Activities	5 (0+5
EC – 2 (Elective Course)	Internship/Dissertation/ Project/Seminar	5 (0+5)
GE -1 (Generic Elective)	Human Rights	5 (5+0)
	Total	15

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Semester- IV

Elective Course 1: Practical Approach to Writing Research Activities

05 Credits

05

Time: 3 Hours Full Marks: 70

The pattern of question papers will be as under

Group A- Compulsory – ten questions (two questions from each unit) of two marks each.

 $2 \times 10 = 20 \text{ marks}$

Group B- Five questions (one from each unit) - each question of 5 marks, four to be answered.

 $5 \times 4 = 20 \text{ marks}$

Group C-Five questions (one from each unit) – each question of 10 marks, three to be answered.

 $10 \times 3 = 20 \text{ marks}$

Unit I

Writing for Grants - and Aid

- ☐ Getting familiar with the proposal format of different funding agencies: National and International level
- Project proposal presentation
- ☐ Proposal for Seminar/ Conference / Workshop

Unit II

Different forms of research writing

- Dissertation
- Project report
- Articles in Journals
- Research notes and reports
- Review of article
- ☐ Review of books

Unit III

Power Point Presentation of any one from Unit I & II

Elective Course2:

Internship / Dissertation / Project / Seminar

Credits

Internship Project:

The students shall be required to undergo and internship project for a total duration of 4-6 weeks in their chosen area of interest/ specialization /optional group that will facilitate their pursuing a professional career in the same field. They will be assigned the project work to be completed during the break after second semester. The organization/ institute (public/private) providing internship facility to students should stand as good professional career support. The students will be required to submit and present a report of the internship project after completion of the same. It is also envisaged that the participating organization / institution will give the performance appraisal of the students work at the end of internship period.

Dissertation:

Every student shall be allotted a research supervisor. The research supervisor shall be from the Department of Home Science and if the topic so requires the co-guide could be from other semester. The topic of research will be finalized by the research supervisor in consultation with the Head of the Department. It is the responsibility of the research supervisor that the student is making the required progress in work. The student will have a give a presentation on the research proposal and a seminar on the findings of research before submitting the dissertation. The suggestions and constructive criticism of the faculty should be made use of

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by student for further improving the draft of the dissertation. The study must be completed and submitted in the form of a dissertation by the end of the final year. Normally, the M.A. Dissertation is expected to cover 60-80 pages of A4 size, excluding bibliography and appendices. Three copies of the same should be submitted to the Department of Home Science. Each student submitting a dissertation must also submit three copies of the abstract of her dissertation not exceeding 300 words, excluding the title. Marks will be awarded, for research seminars practical exercises and viva-voce examination. Student shall give a formal presentation of the report before the jury comprising of minimum three internal faculty members including internal supervisor who will be appointed by the Director of the college. The external marks will be awarded the external examiner to be appointed by the examination division of the university. The format of the report is given below:

- 1. Research Objective
- 2. Literature Review
- 3. Research Methodology
- 4. Results and Analysis
- 5. Conclusion
- 6. References
- 7. Appendices to include questionnaire, if any

Dissertation shall incorporate the certificate given by the internal supervisor regarding its satisfactory completion.

Seminar

A seminar will be presented based on the Dissertation

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