Savitribai Phule Pune University

(Formerly University of Pune)



First Year B.Sc. Program inHome Science (Faculty of Science and Technology)

F.Y.B.Sc. (Home Science)

To be implemented from Academic Year 2024-2025

INTRODUCTION TO UNDERGRADUATE DEGREE COURSE IN HOME SCIENCE:

As per the recommendations of UGC-F-2022, the undergraduate (UG) degree course in Home Science is a 8- semester course spread over 4-academic years. The Teaching Learning Process (TLP) is students' centric. It involves both theory and practical components. It offers a flexibility of program structure while ensuring that the student gets a strong foundation in the subject and gains in depth knowledge. (Major Core), a student have options courses from the syllabus Besides the comprising of (Minor), GEs, SECs, IKSs and VSCs. Hence, this will be bring out the interdisciplinary as well as multidisciplinary approach and adherence to innovative ways within the curriculum framework. It also allow a students' maximum flexibility in pursuing her studies at the undergraduate (UG) level to the extent of having the liberty to eventually design the degree with multiple exit options. Students have these exits options depending upon the needs and aspirations of the student in terms of her goals of life, without compromising on the teaching learning, both in qualitative and quantitative terms. This will suit the present day needs of students in terms of securing their paths towards higher studies or employment.

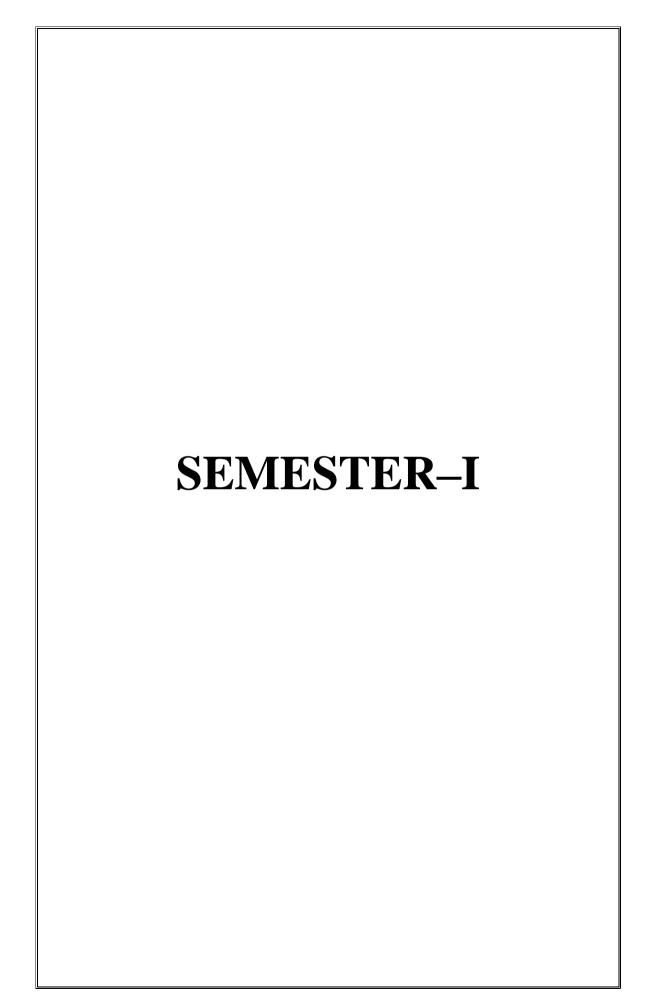
SEMESTER I

Course code	Course Name Type	Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		
		TH	PR	CE	EE	Total	TH	PR	Total	
HSC 101 MJT	Subject 1	Fundamental of Food Science (Th)	02		15	35	50	02		02
HSC 102 MJP		Fundamental of Food Science (Pr)		04	15	35	50	00	02	02
HSC 103 MJT	Subject 2	Human Development I (Th)	02		15	35	50	02		02
HSC 104 MJP		Human Development I(Pr)		04	15	35	50	00	02	02
HSC 105 MJT	Subject 3	Foundation of Art and Design (Th)	02		15	35	50	02		02
HSC 106 MJP		Foundation of Art and Design(Pr)		02	15	35	50	00	02	02
OE 101 HSC	GE/OE	Nutrition For Health (Th)	02		15	35	50	02		02
SEC-101-HSC	SEC	Fabric Ornamentation (Pr)		04	15	35	50	00	02	02
HSC-101-IKS	IKS (Generic)	Course from basket of courses prepared by the University	02		15	35	50	02		02
AEC-151- ENG/HIN/MAR	AEC	Course from University basket	02		15	35	50	02		02
VEC-151-ENV	VEC	Course from University basket	02		15	35	50	00	02	02
					165	385	550	12	10	22

SEMESTER II

Course code	Course Type Course Name	Teaching Scheme Hrs/Week		Examination Scheme and Marks			Credits		lits	
			TH	PR	CE	EE	Total	TH	PR	Total
HSC 151 MJT	Subject 1	Essentials of Nutrition (Th)	02		15	35	50	02		02
HSC 152 MJP		Essentials of Nutrition(pr)		04	15	35	50		02	02
HSC 153 MJT	Subject 2	Human Development II (Th)	02		15	35	50	02		02
HSC 154 MJP		Human Development I (Pr)	-	04	15	35	50		02	02
HSC 155 MJT	Subject 3	Introduction to Textile Science (Th)	02		15	35	50	02	-	02
HSC 156 MJP		Introduction to Textile Science (Pr)	-	04	15	35	50		02	02
OE 151 HSC	GE/OE	Media Skill Development (Pr)		04	15	35	50		02	02
SEC-151-HSC	SEC	Resource Management (Pr)		04	15	35	50	02		02
AEC-151- ENG/HIN/MAR	AEC	Course from University basket	02		15	35	50	02		02
VEC-101-ENV	VEC	Course from University basket	02		15	35	50	02		02
	CC	Course from University basket	02		15	35	50	02		02
					165	385	550	14	08	22





HSC-101-MJT FUNDAMENTALS OF FOOD SCIENCE (TH)

Credits-02 Total Hours-30

- 1) Study the different methods of cooking foods
- 2) Obtain knowledge of different food groups, their composition and nutrients present in the foods.
- 3) Understand the vital link between foods, nutrition and health

UNITS	CONTENT	HOURS
I	Introduction of Food Groups, Food Pyramid and Cooking	04
	Methods:	
	Definition and Terms used in Food Science and Nutrition	
	Food Groups	
	Definition, Classification and Functions of Foods,	
	Basic Food Groups and Need for Grouping Foods and	
	Application of Food Groups In Planning	
	Food Pyramid	
	Adequate/Balanced Diets	
	RDA	
II	Methods of Cooking	06
	Moist heat methods like Boiling, Simmering, Poaching,	
	Steaming, Pressure cooking	
	Dry heat methods: Air as medium of cooking: Grilling,	
	broiling, roasting, Baking,	
	Fat as medium of cooking: Sautéing, Shallow fat frying,	
	Deep fat frying	
	Combined (Moist and dry) Methods: Braising, Stewing	
	Other cooking methods:-Microwave cooking, and Solar	
	cooking.	
	Advantages and Disadvantages of Cooking methods	
III	Nutritional Significance of different Food Groups:	10
	Basic Concepts, classification, Composition, nutritive	

	value and Role in Cookery	
	1) Cereals and Cereal Products-	
	2) Pulses and Legumes	
	3) Milk and Milk Products:	
	4) Eggs-Meat, poultry and fish	
IV	Nutritional Significance of different Food Groups:	10
	5) Fruits, and Vegetables	
	6) Salt, Sugar and Jaggery	
	7) Spices & Condiments	
	8) Beverages	
	9) Convenience Foods	

Reference

- Maney S (2008). *Foods, Facts and Principles*, 3rd Edition Published by Wiley Eastern, NewDelhi.
- Usha Chandrasekhar (2002) *Food Science and Application in Indian Cookery*, PhoenixPublishing House P. Ltd., New Delhi.
- Raina U, Kashyap S, Narula V, Thomas S Suvira, VirS, Chopra S (2010)
 Basic FoodPreparation: A Complete Manual, 4th Edition, Orient Black Swan Ltd, Mumbai.
- Srilakshmi, B. (2017) *Nutrition Science*, New Age International (P) Ltd., New Delhi,.
- Mahtab, S. Bamji, Kamala Krishnasamy, Brahmam G.N.V (2012) Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
- Sunetra Roday (2017). Food Science and Nutrition, Oxford University Press,
 New Delhi.
- Longvah, T, Ananthan, R., Bhaskarachary, K., Venkaiah, K (2017). *Indian Food Composition Tables (IFCT)*, Indian Council of Medical Research,
 National Institute of Nutrition, Hyderabad

HSC-102-MJP FUNDAMENTALS OF FOOD SCIENCE (PR)

Credits-02 Total Hours-60

UNITS	CONTENT	HOURS
I	Weights and Measures, Determination of Edible Portion	04
	of Foods, preparing market order andtable setting	
	Market survey of locally available food items like	
	cereals, pulses, fruits and vegetables, milk and milk	
	products, fats and oils, nuts and oilseeds, sugar and	
	jaggery, meat, fish, and poultry and miscellaneous food	
	items like biscuits, jams, jellies, ketchup etc. and their cost	
II	Food Preparation,	08
	understanding the principals involved, nutritional quality	
	and portion size of 5-7 commonly consumed recipes in	
	each food group	
	Cereals: rice, pulao, Roti, chapathi, paratha, poori, pastas	
	etc	
III	Pulses: Whole, dehusked- Dal, sambar, Chole, Rajmah,	
	etc	12
IV	Vegetables: Dry preparations, Curries	08
V	Milk and milk products: Kheer, Custard	12
	Egg preparations- Boiled, poached, fried, scrambled,	08
	omelettes, egg pudding	
VI	Beverages and Indian Sweets	08
	Total	60

Reference

- Maney S (2008). *Foods, Facts and Principles*, 3rd Edition Published by Wiley Eastern, NewDelhi.
- Usha Chandrasekhar (2002) *Food Science and Application in Indian Cookery*, PhoenixPublishing House P. Ltd., New Delhi.
- Raina U, Kashyap S, Narula V, Thomas S Suvira, VirS, Chopra S (2010)
 Basic FoodPreparation: A Complete Manual, 4th Edition, Orient Black Swan Ltd, Mumbai.
- Srilakshmi, B. (2017) Nutrition Science, New Age International (P) Ltd., New Delhi..
- Mahtab, S. Bamji, Kamala Krishnasamy, Brahmam G.N.V (2012) Text Book of Human Nutrition, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
- Sunetra Roday (2017). Food Science and Nutrition, Oxford University Press, New Delhi.
- Longvah, T, Ananthan, R., Bhaskarachary, K., Venkaiah, K (2017). *Indian Food Composition Tables (IFCT)*, Indian Council of Medical Research, National Institute of Nutrition, Hyderabad

HSC-103-MJT: HUMAN DEVELOPMENT I (TH)

Credits-02 Total Hours-30

- 1. Explain with the developmental stages from prenatal stage to childhood.
- 2. Describe important aspects of development during prenatal stage to childhood.
- 3. Discuss the problems and hazards faced by an individual throughout prenatal stage to childhood.

UNITS	CONTENT	HOURS
	Growth &Development	
	What is Child Development. Meaning and principles of	
	growth & development, Difference between growth and	
	development, Stages of development in life span, concepts	
I	of development and developmental Tasks	07
	Prenatal Stage of Development	
	Reproductive system and Conception, Embryo and fetus.	
	Care during pregnancy and factors affecting prenatal growth	
	and development. Delivery Process	
	Infancy: Neonatal Period – Appearance, adjustments and	
	capacities of neonate	
	Infancy Period: Characteristics, Developmental tasks,	
II	Physical and motor development, Cognitive and language	08
	development	
	Socio-emotional development, Impact of home environment	
	on overall development	
	Childhood Period-Preschool Period: Characteristics,	
	Developmental tasks, Physical and motor development	
Ш	Cognitive and language development, Socio-emotional	07
	development	
	-Impact of home environment on overall development	
TX7	Childhood Period- School Age Period	00
IV	Characteristics Developmental tasks	08

- Physical and motor development
- Cognitive and language development
- Socio-emotional development
 - -Impact of home environment on overall development

- 1. Craig.G.J.(1974):ChildDevelopment,printinceHallInc.Englewoodclifts,NewJer sey.
- 2. Hurlock, E B.(1970): Child Development, Tata Mcgraw Hill Publishes , Delhi.
- 3. Vaikasik Manasashastra: Borude.R.R., Kumathekar M.,Desai B., Golvilakar S., Vidyarthy Gruhprakashan, Pune.
- 4. Manav Vikas: Kandalkarlina, Vidya Prakashan, Pune.
- 5. Balvikas, Dr. Varadpande N. Pimpalipure and k. Publishers, Nagpur.
- 6. Berk L. E. Development through the Lifespan Person Education, Low Price edition.
- 7. D.E. andolds, S. W. (1975). "A Childs World" Tata Mc Graw Hill Publication, New York.

HSC-104-MJP: HUMAN DEVELOPMENT I (PR)

Credits-02 Total Hours-60

UNITS	CONTENT	HOURS
I	View a Films/CD on delivery.	10
II	Prepare a case study report of a pregnant women from 3 rd month onwards.	10
III	Project on child rearing practices indifferent communities. (ex.Rural-Urban)(2- 3 students group can be assigned one project.)	10
IV	Visit to Nursing home and submission of Report.	10
V	Bulletin Display on current topics related to syllabus.(Group of 4-5 students) Topics: 1. Discipline 2. Parenting 3 .Family 4. Media and children	20
		60

- Craig.G.J.(1974):ChildDevelopment,printinceHallInc.Englewoodclifts,New Jersey.
- 2. Hurlock, E B.(1970): Child Development, Tata Mcgraw Hill Publishes , Delhi.
- 3. Vaikasik Manasashastra: Borude.R.R., Kumathekar M.,Desai B., Golvilakar S., Vidyarthy Gruhprakashan, Pune.
- 4. Manav Vikas: Kandalkarlina, Vidya Prakashan, Pune.
- 5. Balvikas, Dr. Varadpande N. Pimpalipure and k. Publishers, Nagpur.
- 6. Berk L. E. Development through the Lifespan Person Education, Low Price edition.
- 7. D.E. andolds, S. W. (1975). "A Childs World" Tata Mc Graw Hill Publication, New York.

HSC-105 MJT: FOUNDATION OF ART AND DESIGN (TH)

Credits-02 Total Hours-30

- 1. To help students understand the basic terminology of art and design.
- To develop skills, abilities, knowledge and attitudes that will enableartistic production and creative problem solving.
- 3. To enable students to apply concepts of art and design to createaesthetically pleasing Interiors.
- 4. To impart knowledge and skills for design appreciation and evaluation.

UNITS	CONTENT	HOURS
	Introduction to Art and Design	
	Art: Meaning and definition	
	Elements & principles of Art and Design	
т	Elements of Design: Light, Line, Form, Colour, Texture,	10
I	Space, Idea and Design	10
	Principles of Design: Balance, Rhythm, Emphasis,	
	Proportion, Harmony.	
	Applications in Interior Design	
	Colour:	
	Meaning, definition and Importance Colour theory	
II	Dimensions of colour – Hue value & Intensity	08
	Classification of colours, Colour schemes and its	
	application, Psychological effect of colour	
	Design: Meaning, definition & types	
111	Types of Design: Structural and Decorative Objectivesof	06
III	Design, Essentials of Design, Applications in Interior	06
	Design	
IV	Interior Furnishing	06
	Furniture and Types, Wall and Wall Finishes, Doors	

Total	30
Accessories for Home Décor, Floor and Floor Finishes	
and Door Types, Window and Window Treatments,	

- 1. Allen. P. S. (1985). Beginnings of Interior Environment (5th Ed), Macmillan Publishing Co. London.
- 2. Bhatt. P. & Goenka S. (2001); Foundation of Art & Design (2nd Ed).Lakhani Book Depot. Mumbai
- 3. Cliffton C., Mogg& Paine. M. (1988). The Curtain Book. ReedInternational Books. New York.
- 4. Craig. H. T. (1987). Homes with Character. Glencoe Publishing Co.Inc. U.S.A.
- 5. Gilliat M. (1986). The Decorating Book. Library of CongressCataloguing Publications, Great Britain.
- 6. Lewis E. L. (1980). Housing Decisions, the Good Heart, Wilcox Co.Inc. Great Britain.
- 7. Seetharaman. P. & Pannu. P. (2005). Interior Design & Decoration. First Edition, CBS Publishers & Distributors. New Delhi

HSC-106- MJP: FOUNDATION OF ART AND DESIGN (PR)

Credits-02 Total Hours-60

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- 1. Develop skills, abilities, knowledge and attitudes that will enableartistic production and creative problem solving.
- 2. Apply concepts of art and design to createaesthetically pleasing Interiors.
- 3. Create skills for design appreciation and evaluation.

UNITS	CONTENT	HOURS
I	Make a practical book illustrating the elements and principles of Design	04
II	Collect the samples of natural light and artificial light	06
III	Types of lines and Draw optical illusion of lines	10
IV	Types of texture, Textural treatments in furniture collect the samples	
V	Classification of colur, Preparation of colour wheel and value and intensity of colour	10
VI	Colour schemes on different motifs and textural effects. optical illusion of Colour	10
VII	Structural and Decorative design- current treads and application of Design in interior, collect information and pictures	10
VIII	Collect pictures of types of Furniture and Wall Finishes, Doors and Window Treatments, Accessories for Home Décor, Floor and Floor Finishes	10

- 1. Allen. P. S. (1985). Beginnings of Interior Environment (5th Ed), Macmillan Publishing Co. London.
- 2. Bhatt. P. & Goenka S. (2001); Foundation of Art & Design (2nd Ed).Lakhani Book Depot. Mumbai
- 3. Cliffton C., Mogg& Paine. M. (1988). The Curtain Book. ReedInternational Books. New York.
- 4. Craig. H. T. (1987). Homes with Character. Glencoe Publishing Co.Inc. U.S.A.
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- 6. Lewis E. L. (1980). Housing Decisions, the Good Heart, Wilcox Co.Inc. Great Britain.
- 7. Seetharaman. P. & Pannu. P. (2005). Interior Design & Decoration. First Edition, CBS Publishers & Distributors. New Delhi

OE-101-HSC NUTRITION FOR HEALTH (TH)

Credits-02 Total Hours-30

- 1. Explain the inter-relationship between food, nutrition and health
- 2. Know the methods and principles involved in cooking.
- 3. Understand the knowledge of food science and the changes occurring during foodpreparation
- 4. Learn to relate foods with their nutrient content

UNITS	CONTENT	HOURS
	Basic concepts in Food and Nutrition	
I	Food and nutrition Functions of Food	
1		
	Basic five food group	
	Nutrients (Sources Function and deficiency)	
II	Macronutrients(Carbohydrates, Protein& Fat)	12
	Micronutrients(Vitamins and Minerals)	
	Food groups (process of food selection and preparation)	
	Cereals	
	Pulses	
	Fruits and Vegetables	6
111	Milk and milk products	U
	Eggs	
	Meat poultry and fish	
	Fats and oils	
	Basic Concepts of Meal Planning	
	Recommended Dietary Intakes	
	Balanced Diet	
IV	Nutritional Status	8
	Assessment of nutritional status	
	Food habits	
	Food misinformation	

- Mudambi, S.R., Rajgopal, M.V.(1990) Fundamentals of Foods and Nutrition, New AgeInternational Pvt. Ltd.
- 2. Kukude, S and others. Food Science, Sheth Publications.
- 3. Mudambi and Sheela Rao: Food science
- 4. Srilaxmi: Food Science, New Age International
- 5. Guthrie Helen (1986) Introductory Nutrition. Times Mirror/ Mosey College Publishing.
- 6. Nutrient Requirements and Recommended Dietary Allowances for Indians-I.C.M.R.Publication 1999.
- 7. Mudambi, S.R. and Rajgopal, M.V. (2012), Fundamentals of Foods and Nutrition NewAge International Pvt. Ltd.
- 9. Food Science 1st Edition (2012) Sheth Publications. Maharashtra State Board ofSecondary and Higher Secondary education Pune,
- 10. Roday S. (2012) Food Science and Nutrition (2nd Ed.) Oxford University Press.
- 11. Joshi S. (2009) Nutrition and Dietetics Mcgraw Hill Higher Education
- 12. Robinson, and Lawler (1990) Normal and Therapeutic Nutrition (17th Edn) MacmillanPub. Co.
- 13. Introductory Nutrition (1986). Mosby College Publishing. Guthrie Helen Times Mirror
- 14. Wardlaw G.M (1997) Contemporary Nutrition, Issues and Insights, 3rd Edition TataMcGraw Hill Inc. Boston.

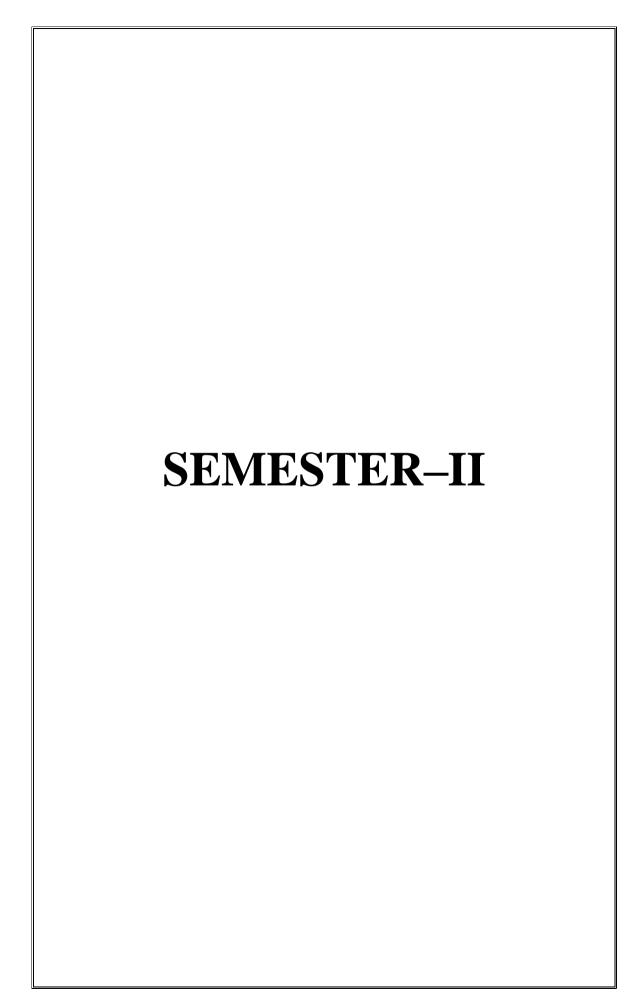
SEC-101-HSC FABRIC ORNAMENTATION (PR)

Credits-02 Total Hours-60

- 1. To familiarize students with various techniques of surfaceornamentation for value addition
- 2. To enable the students to use various surface enrichments for appareland home furnishings

UNITS	CONTENT	HOURS
I	Surface Enrichment Essentials : Materials & tools,types of fabrics & threads, motif selection and repeat, design transfer, threading & stitching, storage & care of hand embroidered textiles and garments.	12
II	Basic Hand Embroidery - I: Line: running, back, stem - Chain: Twisted, rosette, double knot - Blanket: whipped, closed, buttonhole - herring bone: doubled, closed, fish bone.	12
III	Basic Hand Embroidery - II: Feather: closed, opencertain, long armed, Satin: Padded, shaded, long & short - Detached: French & bullion knots, lazy daisy.	12
IV	Decorative Trimmings : Bead, Sequins, zardosi and mirror work.	08
V	Free style Embroidery: Patch work, appliqué, quilting and shadow work.	08
VI	Tie and dye Techniques	08
	Total	60

- 1. Valerie Campbell-Harding,(2004). Machine Embroidery StichPatterns, Kyodo Printing Co. Pvt Ltd, Singapore.
- 2. Lucinda Ganderton, Dorothy Wood, (2005). The Ultimate Book of Quilting, Cross Stitch, Needle Craft, Anness Publishing Ltd, London. References: 1. Hamlyn, (2001). Cushions & Pillow- Professional Skills Made Easy, Hanlyn Octopus, Octopus Publishing Group, New York 2. Maggi Mc Cormick Gorden, (2002). The Ultimate Sewing Book, Collins & Brown Ltd, London.
- 3. Betty Barnden, (2004). The Embroidery Stitch Bible, , Search Press Ltd, London.



HSC-151-MJT -ESSENTIALS OF NUTRITION (TH)

Credits-02 Total Hours-30

- 1.Understand the inter-relationship between food, nutrition and health
- 2.Know the methods and principles involved in cooking.
- 3.Understand the knowledge of food science and the changes occurring during foodpreparation
 - 4. Learn to relate foods with their nutrient content

CONTENT	HOURS
Energy -Definition, forms of energy, units of measurement,	
physiological fuel vales of energy, determination of energy	
value of foods	
BMR – definition, Determination and factors affecting,	06
Factors affecting energy requirements, diet induced thermo	
genesis (SDA)	
Water: Functions, requirements, sources	
Macro Nutrients	
Protein - Classification, functions, Digestion&absorption (in	
brief), RDA, sources and deficiencies Biological value, NPU,	10
PER	12
Carbohydrate - Classification, functions, Digestion&	
absorption (in brief), RDA, sources and deficiencies	
Fiber- Definition Sources Functions Importance in disease	
prevention	0.6
Fat-Classification, functions, Digestion & absorption (in	06
brief), RDA, sources and deficiencies, MUFA, PUFA, SFA	
Micronutrient – Vitamins	
A. Fat-soluble Vitamins (A, D, E & K)- Function, RDA,	
sources and deficiency and excess.	06
B. Water soluble vitamins: Thiamin, Riboflavin, Niacin,	
B12, Folic acid, Biotin and Vitamin C: functions, RDA, food	
	Energy –Definition, forms of energy, units of measurement, physiological fuel vales of energy, determination of energy value of foods BMR – definition, Determination and factors affecting, Factors affecting energy requirements, diet induced thermo genesis (SDA) Water: Functions, requirements, sources Macro Nutrients Protein –Classification, functions, Digestion&absorption (in brief), RDA, sources and deficiencies Biological value, NPU, PER Carbohydrate – Classification, functions, Digestion&absorption (in brief), RDA, sources and deficiencies Fiber- Definition Sources Functions Importance in disease prevention Fat-Classification, functions, Digestion & absorption (in brief), RDA, sources and deficiencies, MUFA, PUFA, SFA Micronutrient – Vitamins A. Fat-soluble Vitamins (A, D, E & K)- Function, RDA, sources and deficiency and excess. B. Water soluble vitamins: Thiamin, Riboflavin, Niacin,

	sources, deficiencies and	
	excess.	
	Micronutrient –Minerals	
	A. Macro minerals- Calcium, Phosphorus and magnesium,	
IV	Sodium, Potassium, Chlorine: Functions, absorption, RDA,	04
l v	sources and deficiencies.	04
	B. Micro Minerals- Iron, Zinc, Fluorine and Iodine:	
	function, absorption, RDA, sources and deficiency	

- Mudambi, S.R., Rajgopal, M.V.(1990) Fundamentals of Foods and Nutrition, New AgeInternational Pvt. Ltd.
- Kukude, S and others. Food Science, Sheth Publications.
- Mudambi and Sheela Rao: Food science
- Srilaxmi: Food Science, New Age International
- Guthrie Helen (1986) Introductory Nutrition. Times Mirror/ Mosey College Publishing.
- Nutrient Requirements and Recommended Dietary Allowances for Indians- I.C.M.R.Publication 2020.
- Mudambi, S.R. and Rajgopal, M.V. (2012), Fundamentals of Foods and Nutrition NewAge International Pvt. Ltd.
- Food Science 1st Edition (2012) Sheth Publications. Maharashtra State Board of Secondary and Higher Secondary education Pune,
- Roday S. (2012) Food Science and Nutrition (2nd Ed.) Oxford University Press.
- Joshi S. (2009) Nutrition and Dietetics Mcgraw Hill Higher Education
- Robinson, and Lawler (1990) Normal and Therapeutic Nutrition (17th Edn)
 MacmillanPub. Co.
- Introductory Nutrition (1986). Mosby College Publishing. Guthrie Helen
 Times Mirror
- Wardlaw G.M (1997) Contemporary Nutrition, Issues and Insights, 3rd
 Edition TataMcGraw Hill Inc. Boston.

HSC-152-MJP ESSENTIALS OF NUTRITION (PR)

Credits-02 Total Hours-60

- 1. Understand the inter-relationship between food, nutrition and health
- 2.Know the methods and principles involved in cooking.
- 3.Understand the knowledge of food science and the changes occurring during foodpreparation
 - 4. Learn to relate foods with their nutrient content

UNITS	CONTENT	HOURS
I	Introduction to Laboratory Concept of standardization Food guide its uses in meal planningConcept of food pyramid RDA	08
II	Plan and prepare recipe for Calories -high moderate and low Plan and prepare recipe for Carbohydrates-10g,15g, 25g recipes with and without sugar Plan and prepare recipe for Protein richdishes Using 1. Plant and animal source	20
III	Plan and prepare recipe for Vitamins- plan and prepare dishes using vitamin A/B 1 Carotene rich foods 2.Retinol-150 mcg 3.Beta-carotene-600 mcg Plan and prepare recipe for Thiamin, Riboflavin and niacin Vitamin C (15 to 20 mcg)	20
IV	Plan and prepare recipe for Calciumand Iron	12

	Dishes from Iron and Calcium rich food (2gm and 150gm mcg/serving)	
	Total	60

- Mudambi, S.R., Rajgopal, M.V.(1990) Fundamentals of Foods and Nutrition, New AgeInternational Pvt. Ltd.
- Kukude, S and others. Food Science, Sheth Publications.
- Mudambi and Sheela Rao: Food science
- Srilaxmi: Food Science, New Age International
- Guthrie Helen (1986) Introductory Nutrition. Times Mirror/ Mosey College Publishing.
- Nutrient Requirements and Recommended Dietary Allowances for Indians- I.C.M.R.Publication 2020.

HSC-153-MJT HUMAN DEVELOPMENT II (TH)

Credits-02 Total Hours-30

- 1. Explain the developmental stages from adolescence to old age.
- 2. Describe the important aspects of development during adolescence to old age.
- 3. Discuss the problems and hazards faced by an individual throughout adolescence to old age.

UNITS	CONTENT	HOURS
	Puberty and Adolescence:	
	Definition, characteristics	
	Development Tasks Physical Development, Puberty, Growth	
	Spurt, Primary and Secondary sex characteristics	
I	Emotional Development during Adolescence, Heightened	10
	emotionality, Meaning, Causes, expression, characteristics of	
	emotional maturity	
	Hazards during Adolscence: Drug Addiction, Alcoholism,	
	Accidents, Suicide, STDs, ATDs Teen age pregnancies	
	Adulthood: Issues and concerns	
	Young Adulthood(Age21-40)Definition, Meaning,	
	Characteristics and Developmental Tasks.	
II	Responsibilities and Adjustments: Parenthood, financial.	10
11	Middle Adulthood(Age41-60)Definition, Meaning,	
	Characteristics and Developmental Tasks.	
	Physical changes- during middle adulthood, Menopause and	
	health issues	
	Old Age	
	Definition, Meaning, Characteristics and Developmental	
	Tasks.	
III	Physiological changes, health problems, cognitive and	10
	memory changes.	10
	Retirement:	
	Effect of retirement on self, family, society and financial	
	problems faced.	

Preparing on self for Death	

- Craig.G.J.(1974):Child Development, Prentice Hall Inc. Englewood clifts, New Jersey.
- Hurlock, EB.(1970): Child Development, Tata Megraw Hill Publishes, Delhi.
- Vaikasik Manasashastra :Borude. R.R., Kumathekar M., DesaiB., Golvilakar S., Vidyarthy Gruhprakashan, Pune.
- Manav Vikas: Kandalkar Lina, Vidya Prakashan, Pune.
- Balvikas, Dr. Varadpande N. Pimpalipure and k. Publishers, Nagpur.
- BerkL.E.Development through the Lifespan Person Education, Low Price edition. Populia, D.E. and olds, S.W.(1975)
- "A Childs World" Tata Macqraw Hill Publication ,New York.

HSC-154-MJP HUMAN DEVELOPMENT (PR)

Credits-02 Total Hours-60

Course Outcomes:

- 1. Explain the developmental stages from adolescence to old age.
- 2. Describe the important aspects of development during adolescence to old age.
- 3. Discuss the problems and hazards faced by an individual throughout adolescence to old age.

UNITS	CONTENT	HOURS
I	Sketching of self-History on growing up stage.	12
II	Skit presentation in group on any topic from syllabus.	12
III	Case on anyone topic: Menopause, Interview/case study on Newly Married couple, parenting, etc.	12
IV	Conducting recreational activity for grandparents/aging people.	12
V	Visit on-1. Old age home or 2. Remand home 3.Junile home	12

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- Vaikasik Manasashastra :Borude. R.R., Kumathekar M., DesaiB., Golvilakar S., Vidyarthy Gruhprakashan, Pune.
- Manav Vikas: Kandalkar Lina, Vidya Prakashan, Pune.
- Balvikas, Dr. Varadpande N. Pimpalipure and k. Publishers, Nagpur.
- BerkL.E.Development through the Lifespan Person Education, Low Price edition. Populia, D.E. and olds, S.W.(1975)
- "A Childs World" Tata Macqraw Hill Publication ,New York.

HSC-155-MJT- INTRODUCTION TO TEXTILE SCIENCE (TH)

Credits-02 Total Hours-30

- 1. To familiarize the students with the terminologies related to apparel and its construction.
- 2. To impart knowledge about textile fibres in terms of their origin and performance characteristics.
- 3. To create awareness regarding selection criteria relating to apparel and home textiles.

UNITS	CONTENT	HOURS
I	Introduction to textile fibers: Fiber- classifications based on their origin (natural and human-made) and length (staple and filament) Primary and Secondary properties of Fibers Fibers: cotton, linen, wool, silk, rayon, nylon, acrylic, polyester	08
П	Yarns Basic steps in mechanical and chemical spinning Yarn Properties: Yarn twist, Yarn numbering. Spun and filament yarns Simple, Complex, Textured Yarns	07
III	Fabric Construction Techniques Weaving: woven structure, General properties of woven fabrics Basic parts of a loom and their functions Basic weaves and variations — Plain ,twill, satin, sateen Fancy Weaves — Leno, Dobby, Jacquard, Pile, Surface figure Knitting: Wales, courses and identification, General properties of knitted fabrics, basic weft and warp knitted structures Blends: Reasons for Blending, properties, common blends available in Market Other methods of fabric construction: felting, non-woven, laces,	

	braids, and nets-their properties	
	Care of Clothing:	
	Laundry, storage and care of textiles Introduction, Types, Uses	
	Water, Soaps, Detergents Methods and care during laundering of	
IV	different textiles	07
	Stain removal – Identification of stain removal, classification, Stain	
	removal procedure - Tea, Coffee, Blood, Butter, Ghee and oil,	
	Curry	

- Booth, J.E. (1996). Principles of Textile Testing. New Delhi: CBS Publishers & Distributors Pvt. Ltd.
- 2. Corbman, P.B. (1983). Textiles: Fibre to Fabric. McGraw-HillPublishers.
- 3. Collier, B.J., & Epps, H.H. (1998). Textile testing and analysis. Prentice Hall Publishers.
- 4. Dantyagi, S. (1996).Fundamentals of Textiles and their Care. India: Orient Black swan Private Limited.
- D'Souza, N. (2014).Fabric Care. New Delhi: New Age International PublisherGreaves, P. H., Saville, B. P. (1995).Microscopy of textile fibres. bios Scientific Publishers
- 6. Gohl, E., Vile sky, L. (2003), Textile Science: an explanation of fiberproperties (2 edition), New Delhi.
- 7. Hollen, R. N., Saddler, J., & Langford, A. (1979). Textiles. Macmillan Publishers.
- 8. Joseph, M. (1992), Introductory Textile Science. Sixth edition, California: Harcourt College Publishers
- 9. Kadolph, S.J. 2009. Textiles. Tenth edition. New Delhi: Dorling Kindersley (India)
- Madhulika, P. (2013). Weaving. New Delhi: Random Publishing. 12.Mahapatra,
 N.N. (2015). Textile Technology. New Delhi: A.P.H. Publishing Co-corporation.

- 13. Needles, L.H. (1986). Textile Fibers, Dyes, Finishes, and Processes. USA, New Jersey: Noyes publications.
- 14. Rastogi, D., & Chopra, S. (2017). Textile
- 15. Annalees Lim,(2013). Textile Crafts Craft Attack, The Rosen Publishing Group, New York.
- 16. Ruth Singer, (2013).Fabric Manipulation: 150 Creative Sewing Techniques, David and Charles, UK. 3. Zeena Shah, (2015), How to Print Fabric: Kitchentable Techniques for Hand-printed Accessories With Over 20 Easy Sewing Projects, "F+W Media, Inc,U.S.
- 17. Jera Brandvig, (2017). Quilt As-You-Go Made Vintage: 51 Blocks, 9 Projects, 3 Joining Methods, C and T Publishing, California.
- 18. Sherri Haab ,(2015). Charm Love Friendship Bracelets: 35 Unique Designs with Polymer Clay, Macrame, Knotting, and Braiding, Quarry Books, China.
- 19. Ruth Singer, (2010). Sew Eco: Sewing Sustainable and Re-Used Materials, Aandamp; C Black, London,

HSC-156-MJP- INTRODUCTION TO TEXTILE SCIENCE (PR)

Credits-02 Total Hours-60

- 1. Understand the students with the terminologies related to apparel and its construction.
- 2. Awareness about textile fibers in terms of their origin and performance characteristics.
- 3. Awareness regarding selection criteria relating to apparel and home textiles.

UNITS	CONTENT	HOURS
I	Identification of fiber by visual test and feel of the fabric, burning test, solubility test, microscopic test	12
II	Identification of stain removal Stain removal procedure – Tea, Coffee, Blood, Butter, Ghee and oil, Curry etc	12
III	Laundry equipment	12
IV	Demonstration of washing Machine Starching	12
V	Washing and finishing of cotton, silk, woolens, synthetics	12
	Total	60

- 1. Booth, J.E. (1996). Principles of Textile Testing. New Delhi: CBS Publishers & Distributors Pvt. Ltd.
- 2. Corbman, P.B. (1983). Textiles: Fibre to Fabric. McGraw-Hill Publishers.
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- D'Souza, N. (2014).Fabric Care. New Delhi: New Age International PublisherGreaves, P. H., Saville, B. P. (1995).Microscopy of textile fibres. biosScientific Publishers
- 6. Gohl, E., Vile sky, L. (2003), Textile Science: an explanation of fiber properties (2 edition), New Delhi.
- 7. Hollen, R. N., Saddler, J., & Langford, A. (1979). Textiles. Macmillan Publishers.

OE-151-HSC MEDIA SKILL DEVELOPMENT (PR))

Credits-02 Total Hours-60

- Develop skill in preparation and presentation of traditional, printed and projected media
- 2. To analyze the role of media in imparting developmental messages.
- 3. To develop competencies in script writing.

UNITS	CONTENTS	HOURS
I	Elements of feature writing	
	Selection of topic – informative & Current	04
	Content – font size, spacing, language	
	Planning and writing an article for the print media(Newspaper	
	/Magazine) Planning the article – deciding upon the theme	
II	Organization of Content – Title & Subtitle Illustration, graphs,	08
	Visual Editing of Article	
	Writing Style and Presentation	
	Preparation of leaflets and pamphlets for the selected theme	
III	Selection of topic, target audience	12
111	Layout – title, content size, colors lettering and illustration	
	Information – Accurate Authentic	
	Preparation and presentation of traditional media	
	PUPPETS	
	Preparation of puppets and their Costumes & Accessories	
	Writing Script according to the target audience and the theme	
IV	Provision of music, song & dance	12
	Stage and stage accessories	
	Presentation – manipulation, clarity voice modulation.	

	Preparation of a radio talk for a selected target group	
	Radio Talk	
V	a) Writing Basics - Selection of theme, objective of the talk	12
	b) Writing style (As per the specification of a radio broad cast)	
	c) Presentation	
	STREET PLAY	
	Writing of script for social messages	
VI	Orientation to body language	12
	Voice Modulation	
	Practice & performance of the street play	
		60

- 1. Kumar, Veena, 1998; Media Options for Teachers, Atlantic Publishers and
- 2. Distributors, New Delhi.
- 3. Dominique Joseph, 1993.; The Dynamics of Mass Communication, Me Graw Hill, New York,
- 4. Devito, Joseph, 1988; Human Communication, Harper and Row, New York, 4th edition.
- 5. Lewis, Herschel Gordon, 2000; Handbook of Advertising; NTC Business Book, Illinois
- 6. Subroto Sen., Gupta, Cases in Advertising and Communication Management in India
- 7. Poe, Roy, W. 2000; Communication Technologies, AITBS, Delhi.
- 8. Gupta, V.S., 1999; Communication Technology, Media, Policy and Nation, Concept Publishers, New Delhi
- 9. Larry, Barker, 1990; Communication, Prentice Hall, New Jersey.
- 10. Mathur, Kanwar, B., 2001; Communication, MohitPublications, New Delhi.
- 11. Zeuschner, Raymond, 1997; Communicating Today, Allanand Bacon, Boston.
- 12. Ross, Ramón, S., 9th (Ed), 1992; Speech Communication, Speech Making Process; Prentice Hall, New Jersey

SEC-151-HSC -RESOURCE MANAGEMENT (PR)

Credits-02 Total Hours-60

- To help students understand the fundamental concepts and Principlesof Management
- 2. To assist students in gaining knowledge about the theoretical aspects and practices applicable to the managerial process.
- 3. To enable students to know how to effectively utilize resources such astime, energy and money.

UNITS	CONTENT	HOURS
I	Management Process Introduction ,Meaning and definition ,Basicconcept of Management , Management and Change, Obstacles in Management , Misconception aboutManagement , Steps of Management Process Apply the management process to organize a picnic / wedding anniversary	10
II	Decision Making Process Meaning and Definition, Types of decision making Steps in decision making Process, Factors affecting decision making, Conflicts solving Methods Write a report on decision making process of selecting personal aim	08
III	Resources Definition , Classification and Characteristics Stages of Family Life Cycle: Beginning, Expanding Identify and categorize the available resources in your family.	08
IV	Money Management	08

	Definition, Classification of income	
	Budget: meaning, types and steps	
	Financial security: savings, insurance, taxation and	
	investments, Factors affecting expenditure	
	Prepare a monthly budget for a joint family.	
	Maintain the monthly expenditure in various types of accounting	
	system	
V	Time Management	
	Meaning ,Classification of activities , Tools of Time cost,	10
	Management process applied to time Make a time plan of a	10
	working college day and exam day	
	Energy Management	
VI	Meaning and Classification of household tasks Types of efforts,	
	Energy management process Factors affecting energy	
	management	08
	Fatigue: meaning, types, causes and remedies	
	Observe the task carried out by the homemaker through the use of	
	informal paper and pencil techniques	
VII	Visit any well-known management institute	08
		60

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- Nickel, P., and Dorsey, J. M. Management in Family Living. 4th ed., Wiley and Eastern, New Delhi, 1991.
- Saksena, S. C. Business Administration and Management. Sahitya Bawan, Agra, 1977.
- Singh, P. N. Developing and Managing Human Resources. 2nd ed., Suchandra Publications, Bombay, 1993.
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Huchheiser, Tobert M. Time Management. Barron's Educational Series Inc., New York, 1992. Atkinson, Jacqueline. Better Time Management. Indus, New Delhi, 1993. Batra, Pramod, and Vijay. Management Thoughts for the Family in Business. Think Inc., New Delhi, 1993. Nickell, Paulena. Management in Family Living. 4th ed., Wiley Eastern Ltd., New Delhi, 1967.