

BANASTHALI VIDYAPITH

Bachelor of Science (Home Science)



Curriculum Structure

First Semester Examination, December, 2020
Second Semester Examination, April/May, 2021
Third Semester Examination, December, 2021
Fourth Semester Examination, April/May, 2022
Fifth Semester Examination, December, 2022
Sixth Semester Examination, April/May, 2023

BANASTHALI VIDYAPITH
P.O. BANASTHALI VIDYAPITH
(Rajasthan)-304022

No. F. 9-6/81-U.3

**Government of India
Ministry of Education and Culture
(Department of Education)**

New Delhi, the 25th October, 1983

NOTIFICATION

In exercise of the powers conferred by Section 3 of the University Grants Commission Act, 1956 (3 of 1956) the Central Government, on the advice of the Commission, hereby declare that Banasthali Vidyapith, P. O. Banasthali Vidyapith, (Rajasthan) shall be deemed to be a University for the purpose of the aforesaid Act.

Sd/-

(M. R. Kolhatkar)

Joint Secretary of the Government of India

NOTICE

Changes in Bye-laws/Syllabi and Books may from time to time be made by amendment or remaking, and a Candidate shall, except in so far as the Vidyapith determines otherwise, comply with any change that applies to years she has not completed at the time of change.

Sl.No.	Contents	Page No.
1	Programme Educational Objectives	4
2	Programme Outcomes	5
3	Curriculum Structure	7
4	Evaluation Scheme and Grading System	13
5	Syllabus	15

Programme Educational Objectives

The quality of life of society and the family determines positive functioning. Home Science has a vital role to play in increasing the capacity of the family and the community. At Banasthali Vidyapith, the faculty of Home Science strives to work dedicatedly towards women's empowerment through socially-relevant, holistic, interdisciplinary education, in keeping with its unique philosophy of Panchmukhi Shiksha (Five fold education). Home Science curriculum is offered in a composite form as per the development trends incorporating multi-disciplinary skills, linking the general studies with professional courses integrating theory and practice, and flexibility to the credit based system to meet the challenges in Indian ethos and global context. The curriculum is continually innovated to make it globally valuable, locally relevant and responsive to the changing times and needs. The course sensitizes students to the needs of others, especially of those less advantaged, and fosters a service orientation. The faculty also aims to contribute to the national and international knowledge base in Home Science and allied fields. Due emphasis has always been given to the skill development and enhancement in the students. The degrees offered by the faculty include B.Sc. (Home Science) and M.Sc. (Home Science) in Food Science and Nutrition, Human Development and Clothing and Textile. PhD is awarded in all the five branches of Home Science. Home Science is also offered as a subject in B. A. programme.

Objectives of the Home Science programme are

- To acquaint students with interdisciplinary nature of Home Science as an integrated body of knowledge, all interwoven to enhance the quality of life, and multidisciplinary nature of subjects dealing with art and science of living
- To provide education through integrated approach of combining theory, practical, and field work emphasizing gender neutral, family focus, region specific and career perspective
- To prepare students to become actively involved in local and regional professional service activities which allow continuous initiative for empowering the individual, family and community
- To inculcate scientific thinking to undertake research projects of national and international recognition and publish multidisciplinary papers.

Programme Outcomes

- **PO1: Knowledge** – Have knowledge and holistic understanding of the core courses related to Home Science including Human Development, Foods and Nutrition, Clothing and Textile, Human Management, Extension Education and Communication; and basic courses associated with discipline of Home Science, including Social Sciences, Biological sciences, Physical sciences, Technology and Management.
- **PO2: Planning Abilities-** Apply skills in designing, implementing, monitoring and evaluating programmes effectively for individuals, family, community, and for vulnerable groups of society.
- **PO3: Problem Analysis-** Solve problems concerning home ,family , and society for ensured physical and mental health in the changing socio-economic scenario viz. dietary problems, behavioral problems, clothing problems, social problems by applying scientific methods ; through critical thinking, assessing, analyzing, finding appropriate solutions and taking decisions
- **PO4: Modern Tool Usage-** ability to select and use appropriate methods and procedures; tools and equipments; raw materials and other resources for knowledge, skill enhancement, designing and creation of new products, assessment and evaluation
- **PO5: Leadership Skills-** apply leadership skills; inspiring, taking responsibility, delegating tasks while working in a team, communicating with other teams, providing guidance to lesser skilled in various settings be it family, industry or institutions or carrying out research projects
- **PO6: Professional Identity-** Take various professional roles in industries, govt./non-govt. organizations, institutes as educators, entrepreneurs, counselors, social workers, consultants, designers, researchers and exhibit competencies & skills
- **PO7: Ethics-** Apply ethical practices while data collection, and conducting experiments ; involving human beings as well as animals, delivering professional responsibilities
- **PO8: Communication-** Use soft skills for clear , accurate, unambiguous effective communication using verbal and non-verbal skills at inter / intra personal and professional level

- **PO9: Home Science and Society-** Apply knowledge and competencies developed as graduates to impart knowledge, identify, analyze and address family and societal issues to improve quality of life of individual, family and society as a whole, also covering marginalized and vulnerable groups of society.
- **PO10: Environment and Sustainability-** Critically evaluate impact of household and industrial practices on environment. Appreciate use of sustainable practices for improved physical, emotional, social, psychological environment at micro / macro level
- **PO11: Life Long learning** – ability to reason out, learn and improve oneself in the changing dynamic scenario by strengthening the strength and weakening of weaknesses for sustainable developmental needs , technological changes, career requirements and new avenues.
- **PO12: Project-** Provide opportunity to students to get acquainted with innovative projects and develop skills to plan and undertake intervention projects.

Curriculum Structure

Bachelor of Science (Home Science)

First Year

Semester - I

Course Code	Course Name	L	T	P	C*
BVF 011/ BVF 014	General English /सामान्य हिन्दी	2	0	0	2
	Core Foundation Course - I	2	0	0	2
HSC 103	Elementary Human Physiology	4	0	0	4
HSC 103L	Elementary Human Physiology Lab	0	0	2	1
HSC 106	Fundamentals of Bio - Chemistry and Microbiology	4	0	0	4
HSC 106L	Fundamentals of Bio - Chemistry and Microbiology Lab	0	0	2	1
HSC 111	Introduction to Home Science	4	0	0	4
HSC 112	Introduction to Human Development	4	0	0	4
HSC 114	Textiles and Their Care	4	0	0	4
HSC 114L	Textiles and Their Care Lab	0	0	4	2
Semester Total:		24	0	8	28

Semester - II

Course Code	Course Name	L	T	P	C*
BVF 014/ BVF 011	सामान्य हिन्दी/General English	2	0	0	2
	Core Foundation Course - II	2	0	0	2
HSC 104	Elements of Food Science	4	0	0	4
HSC 104L	Elements of Food Science Lab	0	0	4	2
HSC 105	Fabric Construction	4	0	0	4
HSC 109	Interior Designing and Decoration	4	0	0	4
HSC 109L	Interior Designing and Decoration Lab	0	0	4	2
HSC 110	Introduction to Extension Education	4	0	0	4
HSC 113	Life Span Development - I (Prenatal to Early Childhood Years)	4	0	0	4
Semester Total:		24	0	8	28

Second Year

Semester - III

Course Code	Course Name	L	T	P	C*
	Core Foundation Course - III	2	0	0	2
	Elective Foundation Course - I	2	0	0	2
HSC 206	Food Preservation and Protection	4	0	0	4
HSC 207	Fundamentals of Clothing Construction	4	0	0	4
HSC 207L	Fundamentals of Clothing Construction Lab	0	0	4	2
HSC 209	Human Nutrition and Meal Planning	4	0	0	4
HSC 209L	Human Nutrition and Meal Planning Lab	0	0	4	2
HSC 211	Introduction to Resource Management	4	0	0	4
HSC 213	Life Span Development - II (Middle Childhood to Old Age)	4	0	0	4
Semester Total:		24	0	8	28

Semester - IV

Course Code	Course Name	L	T	P	C*
	Core Foundation Course - IV	2	0	0	2
	Elective Foundation Course - II	2	0	0	2
HSC 201	Communication Process	4	0	0	4
HSC 201L	Communication Process Lab	0	0	4	2
HSC 202	Family Clothing	4	0	0	4
HSC 202L	Family Clothing Lab	0	0	4	2
HSC 203	Family Dynamics	3	0	0	3
HSC 203L	Family Dynamics Lab	0	0	2	1
HSC 208	Guiding Child Behavior	3	0	0	3
HSC 208L	Guiding Child Behavior Lab	0	0	2	1
HSC 214	Nutrition for Vulnerable groups	4	0	0	4
Semester Total:		22	0	12	28

Third Year**Semester - V**

Course Code	Course Name	L	T	P	C*
	Vocational Course - I	2	0	0	2
	Core Foundation Course - V/ Elective Foundation Course - III	2	0	0	2
HSC 301	Assessment of Nutritional Status	4	0	0	4
HSC 301L	Assessment of Nutritional Status Lab	0	0	4	2
HSC 303	Dyeing, Printing and Finishing	3	0	0	3
HSC 310	Methods and Material for Child Study	4	0	0	4
HSC 310L	Methods and Material for Child Study Lab	0	0	4	2
HSC 315L	Surface Ornamentation Techniques for Textiles Lab	0	0	4	2
HSC 313	Textile Designing	3	0	0	3
	Discipline Elective - I	4	0	0	4
Semester Total:		22	0	12	28

Semester - VI

Course Code	Course Name	L	T	P	C*
	Vocational Course - II	2	0	0	2
	Elective Foundation Course - III/ Core Foundation Course - V	2	0	0	2
HSC 302	Diet Therapy	4	0	0	4
HSC 302L	Diet Therapy Lab	0	0	2	1
HSC 304	Early Childhood Education	4	0	0	4
HSC 304L	Early Childhood Education Lab	0	0	4	2
HSC 306	Fashion Dynamics and Illustrations	3	0	0	3
HSC 306L	Fashion Dynamics and Illustrations Lab	0	0	4	2
HSC 314	Welfare Programmes	3	0	0	3
	Discipline Elective - II	4	0	0	4
	Discipline Elective - II Lab	0	0	2	1
Semester Total:		22	0	12	28

List of Discipline Elective-I

Course Code	Course Name	L	T	P	C*
HSC 309	Introduction to Work Study	4	0	0	4
HSC 316	Behaviour Change Communication	4	0	0	4
HSC 317	Community Health Management	4	0	0	4

List of Discipline Elective-II

Course Code	Course Name	L	T	P	C*
HSC 311	Nutritional Biochemistry	4	0	0	4
HSC 311L	Nutritional Biochemistry Lab	0	0	2	1
HSC 319	Ergonomics and Space Management	4	0	0	4
HSC 319L	Ergonomics and Space Management Lab	0	0	2	1
HSC 324	Programme Planning and Management	4	0	0	4
HSC 324L	Programme Planning and Management Lab	0	0	2	1

List of Core Foundation Course

Course Code	Course Name	L	T	P	C*
BVF 002	Environment Studies	2	0	0	2
BVF 013	Indian Cultural Heritage	2	0	0	2
BVF 017	Selected Writings of Great Authors - I	2	0	0	2
BVF 015	Parenthood and Family Relation	2	0	0	2
BVF 020	Women in Indian Society	2	0	0	2

List of Elective Foundation Course

Course Code	Course Name	L	T	P	C*
BVF 010	Design Thinking	2	0	0	2
BVF 012	Human Body and Health	2	0	0	2
BVF 016	Science of Happiness	2	0	0	2
BVF 019	Universal Human Values	2	0	0	2
BVF 018	Selected Writings of Great Authors-II	2	0	0	2

List of Vocational Course

Course Code	Course Name	L	T	P	C*
VOC 011L	Basic Dress Making	0	0	4	2
VOC 005L	Dress Designing	0	0	4	2
VOC 014	Entrepreneurship - I	2	0	0	2
VOC 015	Entrepreneurship - II	2	0	0	2
VOC 020	Radio Production - I	2	0	0	2
VOC 021	Radio Production - II	2	0	0	2
VOC 022	Web Designing and Internet Technology-I	1	0	0	1
VOC 022L	Web Designing and Internet Technology-I Lab	0	0	2	1
VOC 023	Web Designing and Internet Technology-II	1	0	0	1
VOC 023L	Web Designing and Internet Technology-II Lab`	0	0	2	1
VOC 009	Library Science - I	1	0	0	1
VOC 009L	Library Science - I Lab	0	0	2	1
VOC 010	Library Science - II	1	0	0	1
VOC 010L	Library Science - II Lab	0	0	2	1
VOC 018	Photography – I	0	0	4	2
VOC 019	Photography - II	0	0	4	2
VOC 016	Introduction to Artificial Intelligence - I	2	0	0	2
VOC 017	Introduction to Artificial Intelligence - II	2	0	0	2
VOC 012	Computer Assisted Learning and Teaching	1	0	0	1
VOC 012L	Computer Assisted Learning and Teaching Lab	0	0	2	1
VOC 013	Emerging Technologies for Learning and Teaching	2	0	0	2

1. Student can opt for at most 2 additional Open (Generic) audit/credit Elective from other disciplines opting at most 1 per semester from Semesters III onwards with prior permission of respective heads and time table permitting.
2. Every Student shall also opt for:
 Five Fold Education: Physical Education I, Physical Education II,
 Five Fold Education: Aesthetic Education I, Aesthetic Education II,
 Five Fold Education: Practical Education I, Practical Education II
 one each semester

* **L - Lecture hrs/week ; T - Tutorial hrs/week;**

P- Project/Practical/Lab/All other non-classroom academic activities, etc. hrs/week; C- Credit Points of the Course

Note: Syllabus of Foundation and Vocational courses are available in separate booklet, "Curriculum Structure and Syllabus Foundation and Vocational Courses"

Five Fold Activities

Aesthetic Education I/II	Physical Education I/II
BVFF 101 Classical Dance (Bharatnatyam)	BVFF 201 Aerobics
BVFF 102 Classical Dance (Kathak)	BVFF 202 Archery
BVFF 103 Classical Dance (Manipuri)	BVFF 203 Athletics
BVFF 104 Creative Art	BVFF 204 Badminton
BVFF 105 Folk Dance	BVFF 205 Basketball
BVFF 106 Music-Instrumental (Guitar)	BVFF 206 Cricket
BVFF 107 Music-Instrumental (Orchestra)	BVFF 207 Equestrian
BVFF 108 Music-Instrumental (Sarod)	BVFF 208 Flying - Flight Radio Telephone Operator's Licence (Restricted)
BVFF 109 Music-Instrumental (Sitar)	BVFF 209 Flying - Student Pilot's Licence
BVFF 110 Music-Instrumental (Tabla)	BVFF 229 Aeromodelling
BVFF 111 Music-Instrumental (Violin)	BVFF 210 Football
BVFF 112 Music-Vocal	BVFF 211 Gymnastics
BVFF 113 Theatre	BVFF 212 Handball
Practical Education I/II	BVFF 213 Hockey
BVFF 301 Banasthali Sewa Dal	BVFF 214 Judo
BVFF 302 Extension Programs for Women Empowerment	BVFF 215 Kabaddi
BVFF 303 FM Radio	BVFF 216 Karate - Do
BVFF 304 Informal Education	BVFF 217 Kho-Kho
BVFF 305 National Service Scheme	BVFF 218 Net Ball
BVFF 306 National Cadet Corps	BVFF 219 Rope Mallakhamb
	BVFF 220 Shooting
	BVFF 221 Soft Ball
	BVFF 222 Swimming
	BVFF 223 Table Tennis
	BVFF 224 Tennis
	BVFF 225 Throwball
	BVFF 226 Volleyball
	BVFF 227 Weight Training
	BVFF 228 Yoga

Every Student shall also opt for:

Five Fold Education: Physical Education I, Physical Education II,

Five Fold Education: Aesthetic Education I, Aesthetic Education II,

Five Fold Education: Practical Education I, Practical Education II

one each semester

Evaluation Scheme and Grading System

Continuous Assessment (CA) (Max. Marks)					End-Semester Assessment (ESA) (Max. Marks)	Grand Total (Max. Marks)
Assignment		Periodical Test		Total (CA)		
I	II	I	II			
10	10	10	10	40	60	100

In all theory, laboratory and other non classroom activities (project, dissertation, seminar, etc.), the Continuous and End-semester assessment will be of 40 and 60 marks respectively. However, for Reading Elective, only End semester exam of 100 marks will be held. Wherever desired, the detailed breakup of continuous assessment marks (40), for project, practical, dissertation, seminar, etc shall be announced by respective departments in respective student handouts.

Based on the cumulative performance in the continuous and end-semester assessments, the grade obtained by the student in each course shall be awarded. The classification of grades is as under:

Letter Grade	Grade Point	Narration
O	10	Outstanding
A+	9	Excellent
A	8	Very Good
B+	7	Good
B	6	Above Average
C+	5	Average
C	4	Below Average
D	3	Marginal
E	2	Exposed
NC	0	Not Cleared

Based on the obtained grades, the Semester Grade Point Average shall be computed as under:

$$SGPA = \frac{CC_1 * GP_1 + CC_2 * GP_2 + CC_3 * GP_3 + \dots + CC_n * GP_n}{CC_1 + CC_2 + CC_3 + \dots + CC_n} = \frac{\sum_{i=1}^n CC_i * GP_i}{\sum_{i=1}^n CC_i}$$

Where n is the number of courses (with letter grading) registered in the semester, CC_i are the course credits attached to the i^{th} course with letter grading and GP_i is the letter grade point obtained in the i^{th} course. The courses which are given Non-Letter Grades are not considered in the calculation of SGPA.

The Cumulative Grade Point Average (CGPA) at the end of each semester shall be computed as under:

$$CGPA = \frac{CC_1 * GP_1 + CC_2 * GP_2 + CC_3 * GP_3 + \dots + CC_n * GP_n}{CC_1 + CC_2 + CC_3 + \dots + CC_n} = \frac{\sum_{i=1}^n CC_i * GP_i}{\sum_{i=1}^n CC_i}$$

Where n is the number of all the courses (with letter grading) that a student has taken up to the previous semester.

Student shall be required to maintain a minimum of 4.00 CGPA at the end of each semester. If a student's CGPA remains below 4.00 in two consecutive semesters, then the student will be placed under probation and the case will be referred to Academic Performance Review Committee (APRC) which will decide the course load of the student for successive semester till the student comes out of the probationary clause.

To clear a course of a degree program, a student should obtain letter grade C and above. However, D/E grade in two/one of the courses throughout the UG/PG degree program respectively shall be deemed to have cleared the respective course(s). The excess of two/one D/E course(s) in UG/PG degree program shall become the backlog course(s) and the student will be required to repeat and clear them in successive semester(s) by obtaining grade C or above.

After successfully clearing all the courses of the degree program, the student shall be awarded division as per following table.

Division	CGPA
Distinction	7.50 and above
First Division	6.00 to 7.49
Second Division	5.00 to 5.99
Pass	4.00 to 4.99

CGPA to % Conversion Formula: % of Marks Obtained = CGPA * 10

First Semester

Disciplinary Courses

HSC 103 Elementary Human Physiology

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Describe the functioning of various body organs and integrated functioning of all systems in human body
- Examine some basic parameters of human fitness
- Apply the knowledge of First Aid in different situations

Syllabus:

Unit I

- a) Animal Cell Structure– Basic structure and function of sub cellular organelles
- b) Tissues- Basic structure and functions of various types of tissues

Unit II

- a) Digestive system- Organs of digestive system and their physiology; Role of enzymes in digestion of carbohydrate, protein and fat
- b) Excretory System-Organs of excretory system, formation of urine and its composition

Unit III

- a) Reproductive system- Structure of internal reproductive organs (male and female). Menstrual cycle (in brief) Physiology of conception, parturition, lactation and contraception
- b) Endocrine system- Functions of hypothalamus, pituitary, gonads, adrenal glands, Pancreas, Thyroid and Parathyroid gland

Unit IV

- a) Circulatory System- Structure and functions of heart; Composition and functions of blood and lymph
- b) Respiratory System- Organs of respiratory system. Process of respiration, transport and exchange of oxygen and carbon dioxide in the body

Unit V

- a) Central nervous system (CNS) - Structure of nerve cell, Physiology of nerve transmission, Functions of spinal cord, medulla oblongata, cerebrum and cerebellum
- b) Elementary idea about five sense organs with details of the following: Physiology of vision and hearing

References :

1. Ross & Wilson (1996). *Foundations of Anatomy and Physiology* (8th ed.). New York: Churchill Livingstone, Elsevier
2. Sanghani, P. B. (2012). *Human Anatomy and Physiology with health education*. New Delhi: Tata Mc Graw Hill Education Private Limited.
3. Sears, W.G. & Winwood, R.S. (1982). *Anatomy and Physiology for Nurses*, London: Edwards Arnold Publishing Co.Ltd.
4. Tortora, G. J. & Derrickson, B. (2006). *Principles of Anatomy and Physiology*. USA: John Wiley & Sons. Inc.
5. Waugh, A. & Grant, A. (2014). *Anatomy and Physiology in Health and Illness* (12th ed.). New York; Churchill Livingstone, Elsevier.

E-Resources:

- Diagram of human body organs -
<https://in.pinterest.com/pin/429390145695727907/>
- The human body: Anatomy ,facts and functions
<https://www.livescience.com/37009-human-body.html>

HSC 103L Elementary Human Physiology Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	2	1

Syllabus:

1. Identification of Elementary tissues
2. Determination of Hemoglobin
3. Determination of Blood groups
4. Recording of pulse rate and Blood Pressure
5. Tying Bandages - Triangular and roller
6. First Aid in wounds, shock, burn, heat stroke and frost bite, Road accident. Artificial respiration, Bed making for the patient

HSC 106 Fundamentals of Bio-Chemistry and Microbiology

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Analyze principles of Biochemistry (as applicable to human nutrition)
- Explain chemistry and functions of major nutrients in human body
- Discuss nature and role of microbiology
- Apply and practice learned information in qualitative analysis of major nutrients, micro organisms in food

Syllabus :

Unit –I

- a) Introduction of Biochemistry

- b) Introduction to organic functional groups with examples from biochemistry – alcohol, aldehyde, ether, esters, amine and carboxylic groups
- c) Carbohydrate: Classification and nomenclature, chemical structure and functions of mono, di & polysaccharides
- d) Carbohydrates as sweeteners
- e) Lipids : Chemical structures and functions of lipids

Unit II

- a) Amino Acids : Classification, structure and functions of Essential Amino Acids
- b) Proteins : Classification, structure and functions

Unit III

- a) Vitamins and Minerals: Chemical names and functions of Fat soluble and Water soluble vitamins - A, D, E and K, Vitamin B Complex (Thiamin , Riboflavin, Niacin, Pyridoxine, Biotin, Folic Acid, Vitamin B₁₂) and vitamin C (only Basic information)
- b) Minerals and trace elements (Macro and Micro Minerals) : Calcium, Phosphorus, Magnesium, Sodium, Chloride, Iron, Iodine, Zinc and Selenium

Unit IV

- a) Introduction to Microorganisms: Basic structure of bacteria, virus and fungi (only elementary idea) and general characteristics
- b) Benefits and hazards of Microorganisms
- c) Introduction to Microorganisms found in air and water

Unit V

- a) Concept of infectious diseases and their mode of transfer
- b) Resistance – Natural resistance (the first line of defense and second line of defense)
- c) Immunity - Definitions of innate , acquired, active and passive immunity
- d) Concept of immunization

- e) Immunization schedule for children
- f) Importance of cold chain vaccine management

References:

1. Deb, C. (1997). *Fundamentals of Biochemistry*. Kolkata: New Central Book Agency.
2. Rama, Rao (1983). *Text book of Bio-chemistry (5th ed.)*, Tahuker: L.K & S. Publishers.
3. Sharma, S. (1993). *Practical Biochemistry*. Jaipur: Classic Publishing House.
4. Sharma, S. (2007). *Experiments and Techniques in Biochemistry*. New Delhi: Galgotia Publications Pvt. Ltd.
5. Singh, R.P. and Kamal (1989). *An Introduction to Microbiology*. Allahabad: Central Book depot.
6. Volk, W.A. and Wheeler M. F(1998). *Brave Microbiology (5th ed.)*. New York: Haeper and Row Publishers.

HSC 106L Fundamentals of Bio-Chemistry and Microbiology Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

Syllabus:

1. Qualitative analysis of carbohydrates
2. Qualitative analysis of fats and proteins
3. Acid - Alkali titrations and determination of PH by indicator paper
4. Examination of permanent slides of pathogenic microorganisms
5. Bacterial staining - gram staining
6. Bacterial cultivation - Preparation and sterilization of media-
Nutrient Agar- Inoculation and Incubation

HSC 111 Introduction to Home Science

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Discuss concept, , historical background and relationship between Home Science with foundation and supportive courses
- Explain the scope of different areas of Home Science
- Utilize information in designing and developing skills needed for further specialization and entrepreneurship

Syllabus:

Unit-I

- a) Definition, Philosophy and Objectives of Home Science
- b) Historical development of the field of Home Science in India (in brief)
- c) Role of Home Science for empowering women (through enhancing communication skills, presentation skills, personal skills and preparation for placement)
- d) Scope of Home Science - Educational and Vocational

Unit –II

- a) Foundation Courses: Importance and their relationship with Home Science
- b) Supportive Courses: Importance and their relationship with Home Science
 (Physics, Chemistry, Biology, Education, Agriculture, Dairy Science, Philosophy and Computer Application)
- c) Disciplinary Courses: Five Major Areas- basic concepts, courses and significance

Unit-III

- a) Social Sciences and Home Science
- b) Basic concepts of Sociology - Society, culture, primary and secondary groups, Social Change

- c) Basic concepts of economics- goods, utility, price, wealth, demand and supply Laws of utility, laws of demand and supply
- d) Market-Definition and classification

Unit –IV

- a) Psychology and Home Science
Definition and scope of Psychology, Areas of Psychology (Developmental, Experimental, Comparative, Clinical, Social, Abnormal and Educational)

Psychological Needs

- b) Learning-Meaning and Importance of learning theories
- c) Memory, Sensation, perception, Thinking (in brief)

Unit-V

- a) Entrepreneurship Development and Home Science
- b) Concept, definition and significance
- c) Entrepreneur- characteristics, challenges faced by Women Entrepreneur
- d) Formalities in Enterprise Setting –
 - Preparation of project proposals
 - Availing of licenses, quotas, finance, subsidies
 - Insurance, security, guarantee
 - Registration

References:

1. Aggarwal, J. C. (2004). *Educational Psychology*. New Delhi: Vikas Publishing House Pvt. Ltd.
2. Bansal, I.& Kumari, C. (2009). *Home Science: An Introduction*. Banasthali: Navjeevan Press.
3. Bhushan, B. & Sachdeva, R. (1983). *Sociology*. , Allahabad: Kitab Mehal.
4. Chandra, A. (1978). *Introduction to Home Science*. New Delhi: Metropolitan Book Company, Ltd.

5. Chauhan, S.S. (1983). *Advanced Educational Psychology*. (5th ed.). Agra: Vikas Publishing House, Pvt. Ltd.
6. Devdas, R.P. (1978). *Methods of Teaching Home Science*. New Delhi: NCERT.
7. Devdas, R.P. (1978). *The meaning of Home science*. New Delhi: NCERT.
8. Khanka, S.S.(1999). *Entrepreneurial Development*. New Delhi: S. Chand and Company, Ltd.
9. Sharma, K.R. (2007). *Fundamental of Sociology* .Chennai: Atlantic Publishers.
10. Verma, S. & Deshpandey, A. (1997). *Parivarik Vitt*. Shri Saraswati Sadan Mansuri, New Delhi: Hindi Granth Academy.
11. Vidyalankar, S. (1976). *Samajshastra*. Jaipur: Hindi Granth Academy.

HSC 112 Introduction to Human Development

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Discuss concept and various aspects of Human Development
- Explain growth and development of children
- Appraise concern and issues related to parenting and development aspects
- Relate theories to developmental aspects

Syllabus :

Unit-I Orientation to Human Development

- a) Concept, scope and significance of human development
- b) Human Development as multi disciplinary science
- c) Objectives of studying children, major approaches and methods of child study.

Unit-II Orientation to Growth and Development

- a) Understanding growth and development (definitions)
- b) General principles of development
- c) Constraints and facilitators in growth and development (influences of heredity and environment)

Genetic inheritance: (i) fertilization (ii) number of chromosomes, (iii) the unique third pair determines sex, sex chromosomes (iv) genotype and phenotype, (v) sex linked genetic effects.

Environmental pre-requisites: (i) Nutrition, (ii) opportunities

Interaction between environment and inheritance: (i) genes provide the predisposition, range and direction of development, (ii) environment determines the extent or limit

- d) Maturation and learning (with reference to Gessell's maturational point of view and Watson and skinner's behaviorist point of view).

Unit-III

- a) Fundamental needs of children.
- b) Child rearing practices, disciplinary practices and their impact on children.
- c) Importance of early years of life.

Unit-IV Dimensions of Development

- a) Physical and Motor development - factors influencing physical and motor development
- b) Language development - functions, factors influencing
- c) Moral development - meaning, factors influencing development (with special reference to Kohlberg's theory)

Unit-V Dimensions of Development

- a) Cognitive development across the life span (with brief introduction to Piaget's theory)
- b) Emotional development - development of different emotions, factors predisposing to emotional development, characteristics of children's emotions.
- c) Social Development - Importance, factors influencing social development, agents of socialization.

References:

1. Gupt, Ram Babu (1996). *Vikasatmak Monovigyan*. Agra: Ratan Prakashan Mandir
2. Hurlock, Elizabeth B. (1984). *Bal Manovigyan* (6th ed.). New Delhi : Tata Mc Graw Hill.
3. Hurlock, Elizabeth B. (1978). *Child Development* (6th ed.). New Delhi: Mc Graw Hill Publishers Ltd.
4. Mussen, P., Conger J.J., Kagan J. and Haston AC (1990). *Child Development and Personality*. New York: Harper & Row.

HSC 114 Textiles and Their Care**Max. Marks : 100****(CA: 40 + ESA: 60)****L T P C****4 0 0 4****Learning Outcomes:**

Upon completion of the course students will be able to

- Select and evaluate textile material critically for the specific end use.
- Differentiate among various types of fiber, yarns and fabrics that would meet the requirement of garment and textile industries.
- Use various types of materials, reagents, equipments and processes involved in care of textiles.
- Demonstrate good base knowledge for higher degree program

Syllabus**Unit I**

- a) Importance of studying textiles
- b) Essential properties of textile fibers, classification of fibers
- c) Origin, production method, properties and uses of natural fibers: cotton, flax, wool, silk and jute

Unit II

Manufacturing process, properties, importance and uses of rayon, acetate, nylon, polyester, acrylic and modacrylic Minor fibers: Ramie, Sisal, Pine and Asbestos

Unit III

- a) Yarn Manufacturing- Mechanical and Chemical spinning method. Mechanical Method- Conventional ring spinning method, Chemical Method- Wet, dry and Melt.
- b) Different types and characteristics of simple and complex yarn
- c) Fabric Construction techniques- Basic loom parts and operation, Types of basic weaves and other fabric construction methods- knitting, felting and non woven

Unit IV

- a) Laundry Agents- water, soap, detergent, Blueing agents and stain removers, stiffening agents.
- b) Washing equipments, washing principles, washing methods- friction, kneading and squeezing etc.

Unit V

- a) Stain Removal- methods, principles of stain removal.
- b) Drycleaning. Care of different fiber fabrics (Washing, Ironing, Storage): cotton, wool, silk and man made.

References :

1. Corbman, B.P. (1983). *Textiles: Fiber to Fabric* (6th ed.). New York: McGraw Hill Publication.
2. Dantyagi, S. (2006). *Fundamentals of Textiles and their Care* (5th ed.). Delhi: Orient Longman private ltd.
3. Deulkar, D. (1982). *Household textiles and Laundry Work*. Delhi: Atma ram and Sons.
4. Gohl, E. P. G. & Vilensky, L. D. (1981). *Textiles-for modern living*. Melbourne: Longman Cheshire.
5. Hollen, N. & Saddler, J. (1979). *Textiles* (5th ed.). New York: MacMillan Publishing Co.
6. Joseph, M. L. (1986). *Introductory Textile Science*. New York: Holt, Rinehart and Winston.
7. Tortora, G. P. (1978). *Understanding Textiles*. New York: MacMillan publishing Co.

E-Resources:

1. Textile fibers classification
<https://www.textileschool.com/2782/comprehensive-list-of-textile-fibers/>
2. Fancy yarns
<https://nptel.ac.in/courses/116102038/42>
3. Handbook of textile fibers
<https://www.scribd.com/doc/23984852/Handbook-of-Textil-Fibers>
4. Textile fibers: Classification and properties pdf
<http://bieap.gov.in/Pdf/CGTPaperII.pdf>
5. Textile science book
http://cbseacademic.nic.in/web_material/Curriculum/Vocational/2018/Textile%20DesignT&P_XI_829.pdf
6. Textile fibers, dyes, finishes and processes
<https://www.scribd.com/document/25717442/Textile-Fibers-Dyes-Finishes-and-Processes>

HSC 114L Textiles and Their Care Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Syllabus:

1. Identification of fibers- Cotton, Silk, Wool, Nylon, Polyester and Rayon
2. Identification of yarns- simple, ply, cord, novelty
3. Identification of fabric- woven, knitted, lace and nonwovens
4. Preparation of basic weaves- plain, twill, satin and sateen
5. Washing, Stiffening and Ironing of different fiber fabrics
6. Stain Removal

Second Semester

Disciplinary Courses

HSC 104 Elements of Food Science

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Explain the chemistry underlying the properties of various food components
- Explain functions of food and identify good sources of nutrients
- Know the basic concept of food science
- Apply the various methods of cooking in daily life
- To make informed judgments in use of different commodities in various food preparations

Syllabus:

Unit I

- a) Basic Physico- chemical properties in food system
- b) Hydrogen ion concentration (pH).
- c) Surface tension
- d) Plasticity
- e) Colloidal properties
- f) Iso- electric point of proteins
- g) Functions of food.
- h) Food as a source of nutrients
- i) Five food groups.
- j) Merits and demerits of methods of food preparation
 - Boiling, Pressure cooking, Steaming, Sautéing, Roasting, Stewing, Simmering

Unit II

- a) Cereals - general composition and structure
- b) Wheat - composition, structure, milling, gelatinization,
- c) Rice - composition, parboiling
- d) Starch - granular structure, gelatinization, dextrinization, gel formation, retrogradation
- e) Sugar - types, manufacturing process of white and refined sugar, effects of heat on sugar, crystallization and caramelization

Unit III

- a) Milk - Composition, processing pasteurization, homogenization, sterilization, types of milk.
- b) Milk products - Manufacturing and composition of cheese, milk powder, cream, butter ghee, yoghurt.
- c) Pulses and legumes- composition, processing, anti nutritional factors affecting cooking quality.
- d) Egg. - structure, composition, quality, coagulation and denaturation of egg protein, uses in cooking.
- e) Meat, fish and poultry – nutrition aspect, post mortem changes in meat.

Unit IV

- a) Vegetables and fruits - composition and nutrient content processing, enzymatic browning, pectic substances, processed products.
- b) Food adjuncts - spices, condiments, herbs, extracts, concentrates, essence.
- c) Salt - types and uses.

Unit V

- a) Convenience food - role, types, advantages, contribution to diet
- b) Leavening agents - biological chemical constituents used in cooking and bakery.
- c) Beverages - tea, coffee, cocoa: Nutritional aspects.

References :

1. Mudambi, S., Shalini R.S. & Raw, M. (2007). *Food Science*, New Delhi: Wiley East limited,
2. Shadak, S.M. & Manay, N.S. (1996). *Food Facts & Principles*. New Delhi : Wiley Eastern Ltd.
3. Srilakshmi, B. (1996) *.Food Science*. New Delhi: New age international Pvt. Ltd.
4. Swaminathan, M. (1987). *Food Science Chemistry and Experimental Foods*. Bangalore : The Bangalore Printing and publishing Co. ltd.

HSC 104L Elements of Food Science Lab**Max. Marks : 100****(CA: 40 + ESA: 60)****L T P C****0 0 4 2****Syllabus :**

1. Kitchen equipments - uses and care
2. Weights & measures
3. Cooking methods
4. Cereal cookery emphasizing- dextrinization, gelatinization, identification of grains, Effect of treatments on identity of grains and functions of starch
5. Sugar cookery
6. Milk & milk products cookery
7. Vegetables cookery emphasizing effect of acid and alkali on pigments
8. Use of fruits in food preparation
9. Preparation from nuts and oils seeds

HSC 105 Fabric Construction

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion the course, students will be able to:

- Know different yarn manufacturing process and their effect on properties
- Understand and relate various fabric construction methods with properties and end use
- Describe preparatory processes for weaving and develop concept of color and weave effects
- Explain different simple and compound weaves

Syllabus :

Unit I Fabric construction methods - Classification

A brief introduction of non woven and other fabric construction methods-knits, film, foam, lace, braids, woven composites, multicomponent fabric and laminated

Unit II Yarn manufacturing process

Objectives and principles of spinning

Conventional and non-conventional yarn manufacturing method:-

Conventional - ring spinning

Non conventional (for natural-open end, rotor, twist less and air jet spinning; for manmade-dry, wet, melt, emulsion and solution

Classification of yarn - simple, complex and textured, Yarn diameter and Yarn count

Unit III History and development of loom, parts and functions of loom, Basic operations and mechanism of weaving, Intersection theory of weaving

Unit IV Preparatory process for weaving

Winding, warping and sizing of yarn, colour warp preparation, Colour and weave effects - harmony of colour, plaid, stripes and other moire effects

Unit V Weave and their different types, Basic weaves - Plain and its derivatives, twill and satin

Introduction to fancy weaves - Pile, leno, crepe, pique, huckaback, honeycomb, double cloth, dobby and jacquard

References:

1. Blinov, I. and Belay, S. (1988): *Design of Woven Fabrics*. Moscow: Mir Publishers
2. Corbman, B. P. (1985). *Textile Fibres to Fabric*. New Delhi: Gregg Division - Mc. Graw Hill Inc.
3. Grosicki, Z. J. and Watson. (1988). *Textile Design and Colour*, London: Newness, Butterworth
4. Hall, A. J. (1975). *The Standard Hand Book of Textiles*. London: Newness, Butterworth
5. Hollen, N. and Saddler, J. (1964). *Textile*. 5th ed. New York, Mc. Millan Publishing Co.
6. Kadolph, S. J. and Langbord, A. L. (2014). *Textiles*, 11th ed. New Jersey: Prentice - Hall Inc.
7. Tortora, P.G., (1978). *Understanding Textiles*, New York: Macmillan Publishing Company

E-Resources:

- Fabric Construction
<http://download.nos.org/srsec321newE/321-E-Lesson-24.pdf>
- Yarn and classification
<http://cms.gcgl1.ac.in/attachments/article/87/CLASSIFICATION%20OF%20YARN.pdf>

HSC 109 Interior Designing and Decoration

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Compare and relate objects in terms of their aesthetic potentials
- Analyze factors that create beauty and eloquence in different types of interiors
- Synthesize elements of art based on principles of design in order to achieve the objectives of design and decoration

Syllabus:

Unit-I a) Objectives of Interior Designing and Decoration

- b) Meaning and Importance of Art.
- c) Creative Process (i) Pre requisites of Creativity (ii) Steps in Creative process

Unit-II Elements of Art/Design

- a) Line- types, emotional effect, combinations.
- b) Form or Volume-importance, relationship with objects.
- c) Color-Theories, Dimensions, Harmonies/schemes, Psychology of color, classification
- d) Texture-Types, characteristics, Importance in interiors
- e) Pattern-Types of motifs
- f) Light-Types of lighting, luminaires, Illumination required in interiors
- g) Space-characteristics, importance in creating mood and character

Unit-III Principles of design

- a) Proportion - Concept of golden oblong and golden spiral, methods of achieving units of measurement, law of margins.

- b) Balance - Symmetrical, Occult, Radial and Crystallographic
- c) Rhythm - Methods of achieving rhythm
- d) Harmony - Meaning, aspects of harmony
- e) Emphasis - Methods to create emphasis

Unit-IV Space Planning

- a) Types of space plans - Floor plan, Elevation, Site Plan, Perspective view, Landscape plan
- b) Building standards - structural, functional, aesthetic
- c) Introduction to Vaastu Shastra & Feng Shui

Unit-V Implications of elements and Principles of design

- a) Creating illusions with the help of color and light
- b) Principles of furniture arrangement
- c) Window Treatment

References:

1. Faulkner and Faulkner (1977). *Inside Today's Home*. (4th ed.). New York: Reinhart & Winston
2. Kurtz, D. (1987). *Visual imagination: An introduction to Art*. New Jersey: Prentice Hall Inc. Engle Wood Cliffs
3. Sardana, S.C. (2001). *Vaastu Shastra*. New Delhi: New Allied Publishers
4. Sutton & Whelan (2004). *The Complete Color Harmony*. USA: Rockport Publishers Inc.

E-Resources:

- Elements and Principles of Art Design
<https://study.com/academy/lesson/elements-and-principles-of-art-design.html>
- Basic Elements of Design
<https://creativemarket.com/blog/10-basic-elements-of-design>

- Using Illusions in Interior Designing
<http://www.hamstech.com/blog/using-illusions-in-interior-designing>
- Vaastu
<http://www.vaastuinternational.com>

HSC 109L Interior Designing and Decoration Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	4	2

Syllabus :

1. Drawing Floor plans to scale (with engineering scales)
2. Obtaining standard colors (Munsell system of color notation)
4. Obtaining value chart
5. Development of color harmonies
6. Identification of advancing and receding colors
7. Methods of obtaining units of measurement
8. Window Treatments - Types of curtains & draperies, Blinds and Shades
9. Furniture arrangement with cut-outs
10. Development of textures in interiors

HSC 110 Introduction to Extension Education

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Understand meaning, philosophy and principles of Extension Education and its role in national development

- Explain Extension models in practice and their scope in facilitating development
- Design plan of work for need based program
- Ready to be part of various developmental programs

Syllabus :**Unit I** Concept of Extension

- a) Meaning of Extension
- b) Principles of Extension
- c) Philosophy of Extension
- d) Objectives of Extension
- e) National Extension Service
- f) Non Formal Education
- g) Role of Extension Education in National Development

Unit II Extension Models

- a) Technology - Innovation- Transfer Model
- b) Social Education Model
- c) Indigenization Model
- d) Social Action Model
- e) Empowerment/Participation Model

Unit III Motivation & Learning in Extension

- a) Definition, Principles of Learning
- b) Definition of Motivation & Motives
- c) Types of Motives
- d) Factors influencing learning
- e) Cone of Experience

Unit IV Programme Planning & Adoption Process

- a) Definition, steps in Planning
- b) Plan of work

- c) Evaluation of a Programme
- d) Stages in Adoption Process
- e) Types of Adopters

Unit V Plans & Programmes

- a) Five year plans
- b) Community Development Programme
- c) Panchayati Raj System

References:

1. Chauhan, J. (1996). *Prasar Shiksha Aur Soochana Tantra*. Agra: Isha Publication.
2. Dahama, O.P., & Bhatnagar, O.P. (2010). *Education and Communication for Development*. New Delhi: Oxford and IBH Publishing Co., Pvt. Ltd.
3. Dubey, V.K., & Bishnoi, I. (2008). *Extension Education and Communication*. New Delhi: New age International Publishers.
4. Jalihal, K. (2007). *Fundamentals of Extension Education and Management in Education*. New Delhi: Concept Publishing Company
5. Kalla, P.N., & Gakkhar, A. (2005). *Prasar Shiksha Ke Naye Ayam*. Jaipur: Hindi Granth Akadami.
6. Kalla, P.N., & Gakkhar, A. (2010). *New Dimension of Extension and Communication*. Jaipur: University Book House.
7. Maximun, N. (2006). *Understanding Extension Education*. New Delhi: Gyan Publishing House
8. Mohanty, S.R. (2017). *Home Science Extension Education and Rural Development*. Germany: Anchor Academic Publishing.
9. Rajsingh, A., & Saxena, A. (2008). *Prasar Siksha me Sampreshan va Nirdesh Takneek*. Jaipur: University Book House, Pvt. Ltd.
10. Sandhu, A.S. (1993). *Text book on Agricultural Communication : Process and Methods*. Calcutta: Oxford and IBH Publishing Co. Pvt. Ltd.

11. Sharma, O.P. (2013). *Programme Planning and Participatory approaches in Extension*. Udaipur: Agrotech Publishing Academy.
12. Singh, U., & Nayak, A. (2007). *Extension Education*. , New Delhi: Commonwealth Publishers. ISBN 817169442.
13. Supe, S.V. (2005). *An Introduction to Extension Education*. Oxford & IBH Publishing Co. Pvt. Ltd.
14. Vaghmare, S.K.(1980). *Teaching Extension Education*. Vallabhvidyanagar Gujarat: Prashant Publishers.

HSC 113 Life Span Development - I (Prenatal to Early Childhood years)

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Understand various aspects of development from prenatal to early childhood years
- Assess the issues faced and adjustments required during these years

Syllabus:

Unit I Pregnancy -

- a) Human Reproductive System
- b) Conception, signs and symptoms of pregnancy
- c) Common discomforts of pregnancy
- d) Complications during Pregnancy
- e) Care during Pregnancy

Unit II Prenatal Development -

- a) Course of prenatal development
- b) Conditions effecting prenatal development

- c) Overview of birth process and complications
- d) Types of Delivery
- e) Hazards during prenatal development

Unit III Infancy-

- a) Characteristics of Neonate (0-4 weeks) - physical description, sensory capacities and reflexes, becoming coordinated - Feeding, sleeping, crying
- b) Developmental tasks, milestones of development during Infancy
- c) Physical, Motor, social, emotional, cognitive and language development of child from 4 weeks to 2 years

Unit IV Early Childhood-

- a) Definition, overview of early childhood years - highlights, developmental tasks and milestones
- b) Physical, motor, moral, cognitive and language development during early childhood years
- c) Social and emotional development during early childhood years

Unit V

- a) Role of preschool education during childhood years
- b) Importance of play and creative activities during childhood
- c) Need for ECCE programme to provide quality care
- d) Available child care practices and services

References :

1. Berk, L.E. (1996). *Child Development*. New Delhi: Prentice Hall.
2. Cole, M., & Cole, S. (1995). *The Development of Children*. NY: Freeman & Co.
3. Hurlock, E.B. (1978). *Child Development* (6th ed.). New York: Tata McGraw Hill Publishing Company Limited.
4. Hurlock, E.B. (1980). *Developmental Psychology - A Life Span Approach* (5th ed.). New York: Tata McGraw Hill Publishing Company Limited.

5. Rice, F.P. (1965). *Human Development – A Life Span Approach*. New Jersey, NJ: Prentice Hall.
6. Santrock, J.W. (2008). *Life Span Development*. New Delhi: Tata McGraw Hill Companies Pvt. Ltd.

E-Resources:

- Early childhood development and cognitive development
<https://www.pdfdrive.com/early-childhood-development-and-cognitive-development-e63805631.html>
- Early childhood development and cognitive development in developing countries
<https://www.pdfdrive.com/early-childhood-development-and-cognitive-development-in-developing-countries-e124334421.html>
- Effects of Prenatal Stress and Poverty on Fetal Growth
<https://www.pdfdrive.com/effects-of-prenatal-stress-and-poverty-on-fetal-growth-e21046301.html>
- Influence of prenatal stress and postnatal maternal behaviour on child temperament and coping with stress
<https://www.pdfdrive.com/influence-of-prenatal-stress-and-postnatal-maternal-behaviour-on-child-temperament-and-coping-d57252917.html>
- Prenatal Book
<https://www.pdfdrive.com/prenatal-book-e35457151.html>
- Prenatal maternal stress and child motor development
<https://www.pdfdrive.com/prenatal-maternal-stress-and-child-motor-development-1-understanding-the-d53948640.html>
- Prenatal, Perinatal & Postnatal Aspects
<https://www.pdfdrive.com/prenatal-perinatal-postnatal-aspects-e54138046.html>

Third Semester

Disciplinary Courses

HSC 206 Food Preservation and Protection

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Identify and describe causes, principles and methods of food preservation
- Describe personal hygiene requirements for food handlers for preparing food safely.
- Know the principles and objectives of various food laws, standards and authority required for safe food marketing.

Syllabus:

Unit I Food Spoilage-

- a) Causes of food spoilage- Perishable, semi perishable and non perishable food
- b) Factors affecting the growth of micro- organisms in the food
- c) Intrinsic Parameters and Extrinsic

Unit II Food Preservation

- a) Importance and Principles of Food Preservation
- b) Methods of Food Preservation and preparation of Jam, Jelly, pickles, Squash, syrup and Murabba
- c) Use of Low Temperature (Refrigeration and freezing)
- d) Use of High Temperature (Pasteurization and sterilization)
- e) Use of preservatives.
- f) Drying
- g) Radiation

Unit III Food Fermentation- An Introduction

- a) Microorganisms as food – SCP (Single cell Protein).
- b) Introduction to food adulteration and house hold methods of detection

Unit IV Food Additives

- a) Definition
- b) Classification
- c) General principles for the use of food additives issued by FAO/WHO Codex. Ailments commission
- d) Brief explanation of natural and synthetic Preservatives
- e) Introduction to Genetically Modified (G.M.) Foods

Unit V Food Laws and standards

- a) Objectives of food Laws, responsible agencies for safe food
- b) Present Regulations / Orders / Standards related to foods
- c) Main objectives of food Laws
 - i) PFA ii) MFPO
 - iii) FPO iv) Milk and Milk Product orders
- d) Regulatory authorities of food laws and orders

References :

1. Desrosier, N.W.(1977). *Elements of food Technology*. Connecticut USA: AVI Publishing Co.
2. Frazier, W.C., Westhoff D.C.(2014). *Food Microbiology*. New York :Mc Graw Hill Book Company.
3. Gould, G.W.(1994). *New Methods of food Preservation*. London : Black lie Academic and Professional.
4. Swaminathan, M. (1987) *Food Science Chemistry and experimental foods*. Bangalore : The Bangalore Printing and Publishing Co. Ltd.

HSC 207 Fundamentals of Clothing Construction

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Understand basic essentials of clothing construction and process of garment making
- Use acquired garment construction skills for different age groups and figure types

Syllabus :

- Unit I** a) Fundamentals of clothing construction- its importance, terms used in clothing construction
- b) Equipments- Measuring, marking, cutting, stitching, Sewing machine- types, parts, care, handling and problems.
- Unit II** a) Principles and elements of art in clothing design
- b) Factors affecting selection of fabric, age, sex, occupation, figure, garment style, fashion etc.
- Unit III** a) Body measurements and proportion, figures, types and problems, garment designing according to figure
- b) Preparation of fabric for garment cutting
- Unit IV** a) Patterns- types and preparation methods
- b) Layout types and cutting of the fabric
- c) Calculation of material for different garments
- Unit V** a) Hand knitting- abbreviations, types and selection of needles and yarn, Knitting patterns.
- b) Machine knitting- Simple hand knitting machine, its parts and operations.
- c) Mending and Renovation

References :

1. Ajsaonkar, D.B.(1998). *Knitting Technology*. Mumbai : Universal Publication Corp.
2. Doongaji.(2002). *Basic Processes of Clothing Construction*. Delhi : RaajPrakashan.
3. Lewis, D.S. (1960). *Clothing Construction and Wardrobe Planning*. New York : The Macmillan Company.
4. Mazumdar,L. and Vatsala, R.(2004). *Text book of Fundamentals of Clothing Construction*. New Delhi : Indian Council of Agricultural Research.
5. Mullick, P. (2002). *Garment Construction Skills*. New Delhi : Kalyani Publishers.

HSC 207L Fundamentals of Clothing Construction Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Syllabus :

- Hand Stitches- Running, basting, back, buttonhole, hemming, overcasting, picko
- Machine Stitches/seams – Plain and it's finishing, french, lapped, run and fell, decorative seams- slot, piped
- Disposal of fullness- darts, pleats, tucks, gathers, smoking, shirring
- Pockets- patch, inseam, welt
- Plackets and fasteners
- Trimmings, mending
- Sleeves- plain, cap, flared, gathered, puffed
- Collar – baby, cape, Chinese / mandarian/stand/, peter pan, sailor, shirt
- Yokes- straight, round, V shape, U shape
- Stitching of apron and petticoat

- Embroideries- blanket, buttonhole, bullion knot, chain, couching, french knot, fly, feather, herringbone, lazy daisy, running, stem, satin
- Knitting patterns

HSC 209 Human Nutrition and Meal Planning

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- To describe the functions and sources of nutrients
- Assess the dietary requirement of various nutrients and effects of deficiencies and excesses.
- Apply the knowledge in planning and preparation of meals of improved nutritional quality for different groups
- Evaluate acceptability and serving of food.

Syllabus :

Unit I: Nutrition Health relationship. Energy- (unit of energy,) measurement of energy in foods, energy requirement of individuals, factors affecting the energy requirement Basal Metabolic Rate (BMR), factors affecting the Respiratory Quotient, Specific Dynamic Action of food

Water- Introduction, Source, functions, requirement and electrolyte balance

Unit II: Carbohydrate – classification, sources, functions, digestion, absorption and utilization, role of dietary fiber in diet, effect of carbohydrate deficiency

Lipid – classification, sources, functions, digestion absorption and utilization, essential fatty acids and their functions, effect of lipid deficiency

Unit III Proteins- nutritional classification of food proteins, functions, sources, digestion, absorption and utilization, classification of

amino acids and quality of protein , protein requirements and factors affecting the needs

PEM - classification, etiology, signs and symptoms, prevention and treatment

Unit IV Vitamins- history, definition, Sources, requirements, functions and deficiency

Fat soluble vitamin (A,D,E and K), Water soluble vitamins (Thiamine, Riboflavin ,Niacin, Folic acid, Biotin, vitamin B12 and vitamin C)

Minerals – source, requirement, function and deficiency of Calcium, Phosphorous Sodium, Potassium, Magnesium, Copper, Iodine, Fluoride and Iron

Unit V Objectives and importance of meal planning, important considerations for meal planning, balance diet, five basic food groups, recommended dietary allowances (RDA), factors affecting the RDA

Methods of securing meal – traditional and western

Fundamental of sensory evaluation

References:

1. Khanna, K, Gupta S, Mahna R, Puri S, Seth R. and Passi S.J.(1997). *Text book of Nutrition & Dietetics*. New Delhi: Phoenix Publishing House Pvt. Ltd.
2. Mudambi, S.R. (2007). *Fundamental of foods , Nutrition and Diet Therapy*. Delhi: New age international (P) Ltd..
3. Robinson, C.H. (1986). *Normal and Therapeutic Nutrition(17th ed.)*. New York: McMillan Publishing Company.
4. Sharma, S. (2000). *Human Nutrition and Meal Planning*. New Delhi : Jnanda Publishers.
5. Srilakshmi , B. (2004). *Nutrition Science*. New Delhi : New Age, International (P) Limited.

E-Resources:

- Classification of food, balanced diet
<https://www.slideshare.net/JasminaSangani/meal-planning>
- Types of food services and their advantage
<https://www.slideshare.net/iamrealmelissa/food-service-67652942>
- Dietary requirement for various age groups
<https://www.slideshare.net/aneeshajaiswal/dietary-guidelines-11405034>

HSC 209L Human Nutrition and Meal Planning Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Syllabus:

- Preparation of nutrient rich dishes such as:
Protein, Vitamin A, Thiamine, Riboflavin, Niacin, Ascorbic acid, Calcium and Iron
- Preparation of food products for the use of PEM children
- Planning and preparing (in groups) balanced diet for different activity levels.
- Meal serving practice
- Table setting – Modern and traditional

HSC 211 Introduction to Resource Management

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Describe the concepts of management
- Differentiate between various approaches to management
- Understand process and techniques of decision making

Syllabus :

Unit I Management

- a) Management: concept and importance
- b) Systems approach to management
- c) Family resource management as a system

Unit II Philosophy of management

- a) Resources- meaning, importance, types and characteristics,
Guidelines to increase utility of resources
- b) Philosophy of management
 Values- origin and classification
 Goals- characteristics and types
 Standards- characteristics and types

Unit III Approaches to management

- a) Schools of management
 Scientific school
 Classical organization theory
 Behavioral school
- b) Levels of management and managerial skills

Unit IV Management Process

- a) Planning- The Planning System, Dimensions of Plans
- b) Controlling- Energizing, Facilitating, Checking, Adjusting
- c) Evaluation- types, Feedback

Unit V Decision making- Process & Techniques

- a) Definition and Concept of Decision Making
- b) Tools and Techniques for Decision Making
- c) Steps in decision making process
- d) Classification of Decisions
- e) Decision Tree and Cost Benefit Analysis

References:

1. Armstrong, M. (2010). *A Handbook of Management Techniques*. (Revised 3rd ed.). London : Kogan Page Publishers.
2. Daecon R.E.& Firebaugh F.M. (1975). *Context and concepts of Management USA* : Houghton Mifflin Company.
3. Gross I.H. & Crandall, E.W. (1980). *Management for modern families* (3rd ed.) . New Jersey : Prentice Hall Inc. Engle Wood Cliffs.
4. Luthans F.(1998). *Organizational Behavior*. (8th ed.). New York : Ervin-McGraw Hill.
5. Robbins S.P., Decenzo D.A. (2009). *Fundamentals of Management*. (6th ed.). New Jersey : Pearson Prentice Hall.
6. Robbins, S. & Judge, T.A. (2013). *Organizational Behavior* (15th ed.). US : Prentice Hall.
7. Stoner, J., Freeman R. & Gilbert D. (1995). *Management*. (6th ed.). New Delhi: Prentice Hall of India Pvt. Ltd..

E-Resources:

- Management Theory
<http://www.technofunc.com/index.php/leadership-skills-2/leadership-a-management/item/management-theories>
- Motivation Theories
https://www.tankonyvtar.hu/hu/tartalom/tamop412A/2011-0023_Psychology/030300.scorml

HSC 213 Life Span Development - II (Middle Childhood to Old age)

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Acquire knowledge related to various aspects of development in different stages of life span.
- Understand adjustment issues and requirements of different stages from middle childhood to old age.

Syllabus :

Unit-I Middle Childhood (6 to 12 yrs)

- a) Definition, developmental tasks, milestones.
- b) Physical, motor, social, cognitive and emotional development.
- c) Role of family and peer group
- d) Importance of schooling
- e) Effects of success and failure

Unit-II Adolescence (13 to 18 yrs)

- a) Definitions, developmental tasks.
- b) Puberty, growth spurt
- c) Physical, Social, Moral, Cognitive and Emotional development during Adolescence
- d) Choosing a career
- e) Peers and heterosexual relationship, importance of friendship
- f) Heightened emotionality: meaning, causes, conflict with authority
- g) Problems: Drug and alcohol abuse, psychological breakdown, STDs and HIV/AIDS, pregnancy

Unit-III Young Adulthood (19 to 40 yrs)

- a) Definitions, need to study
- b) Development tasks of young adulthood

- c) Responsibilities and adjustments with new family, work place, parenthood, financial matters.
- d) Sex role issues and implications for young adults.
- e) Different developmental aspects during young adulthood.

Unit-IV Middle Adulthood: (41 to 60 yrs)

- a) Definition- physical & psychological changes (senses, diseases)
- b) Menopause and other health issues.
- c) Stress in middle age, coping with stress at family and workplace
- d) Job satisfaction
- e) Pre-retirement- preparation and effect

Unit-V Old Age

- a) Definition, physiological and psychological changes.
- b) Health problems during old age
- c) Cognitive and memory status and changes
- d) Retirement- effect of retirement on self, family, society
- e) Attitudes towards aging
- f) Interests during old age
- g) Issues- old age homes, loneliness, coping with complications, prolonged illness
- h) Death: preparation and coping strategies

References:

1. Berk, L.E. (1996). *Child Development*, New Delhi: Prentice Hall.
2. Cole, M. & Cole, S. (1995). *The Development of Children*. New York, NY: Freeman & Co.
3. Craig, G. (1999). *Human Development*. New Jersey, NJ: Prentice Hall.
4. Gardiner, H.W., Mutter, J.D., & Kosmitzki. (1998). *Lives Across Cultures*. Boston: Allyn & Bacon.

5. Gupta, R. (1998). *Matra Kala Shishu Palan avm Bal Vikas*. Agra: Ratan Prakashan Mandir.
6. Hurlock, E.B. (1980). *Development Psychology: A Life Span Approach* (5th ed.). New York: Tata McGraw Hill Publishing Co. Ltd.
7. Hurlock, E.B. (1990). *Vikas Manovigyan*. Pratham Khand/Dutiya Khand, Hindi Madhyam Karyanvai Nideshalaya, Delhi University Dwara Prakashit.
8. Rice, F.P. (1965). *Human Development : A life Span Approach*. New Jersey, NJ: Prentice Hall.
9. Santrock, J.W. (2008). *Life Span Development*. New York: Tata McGraw Hill Companies, Inc.

E-Resources:

- Ageing and old age as a task
<https://www.pdfdrive.com/ageing-and-old-age-as-a-task-e38334984.html>
- Aging, Economic Growth, and Old-Age Security in Asia
<https://www.pdfdrive.com/aging-economic-growth-and-old-age-security-in-asia-e34443523.html>
- Chapter 16 Middle Adulthood: Emotional and Social Development
<https://www.pdfdrive.com/chapter-16-middle-adulthood-emotional-and-social-development-e7909382.html>
- Factors contributing to life satisfaction in early and middle adulthood
<https://www.pdfdrive.com/factors-contributing-to-life-satisfaction-in-early-and-middle-adulthood-e32013339.html>
- Physical and Cognitive Development in Middle Adulthood
<https://www.pdfdrive.com/physical-and-cognitive-development-in-middle-adulthood-e59558323.html>

Fourth Semester

Disciplinary Courses

HSC 201 Communication Process

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	4 0 0 4

Learning Outcomes:

Upon completion of the course students will be able to:

- Explain concept and different types of communication
- Distinguish different approaches of communication
- Create effective messages to relevant audiences
- Use appropriate media in different approaches of communication

Syllabus :

Unit-I Concept of communication

Meaning and importance of communication, key elements of communication with special reference of Leagan's model, The purpose of communication, Factors affecting / helping communication

Unit-II Communication process

Types of communication - One way, two way or interactive communication, verbal and non verbal, intrapersonal and inter personal, formal and informal

Importance of two way communication

Gaps in Communication and their causes,

Unit-III Approaches of communication

Selection and effective use of following methods and materials

Individual – Home / farm visits, telephone calls, personal letters

Group - lecture, group discussions, meetings, role plays, demonstrations, work- shops, camps

Mass approach- electronic and print media

Unit-IV Basic concepts related to information dissemination, education and propaganda

Modern technology: Basics and effective use

Satellite communication, Videoconferencing, Teleconferencing, Fax, Internet, E-mail , E-page , Cyber Café, Cellular phone

Unit-V Media for communication

Folk Media - songs, stories, street theater, puppet play, phad, kavadi

Importance of Folk Media

Print media- posters, charts, leaflets, books, articles/stories, cartoons

Audio- Visual aids- meaning, classification, merits and limitations

References:

1. Chauhan, J. (1996). *Prasar Shiksha Aur Soochana Tantra*. Agra, Isha Publication.
2. Dahama, O.P., & Bhatnagar, O.P. (2010). *Education and Communication for Development*. New Delhi, Oxford and I BH Publishing Co., Pvt. Ltd.
3. Harpalani, B.D. (1994). *Grih Vigyan Mein Prasar Shiksha*, Agra, Star Publication.
4. Joseph, M.K. (1996). *Modern Media and communication, Sociology and Communication Revolution*. (Vol.- 1), New Delhi, Anmol Publication Pvt. Ltd.
5. Joshi, U.J. (2000). *Textbook of Mass Communication*. New Delhi, Anmol Publishers.
6. Kalla, P. N., & Gakkhar, A. (2010). *New Dimension of Extension and Communication*. Jaipur, University Book House.
7. Malhan, P.N. (1992). *Communication Media Yesterday, Today and Tomorrow*. New Delhi, Ministry of Information and Broadcasting.
8. Mody, B. (1991). *Designing messages for Developmental Communication*, New Delhi, SAGE Publications.
9. Raines, C., & Williamson, L. (1995). *Using Visual Aids- the effective use of type, colour and graphics*. New Delhi, Viva books private Ltd.

10. Rajsingh, A., & Saxena, A. (2008). *Prasar Siksha me Sampreshan va Nirdesh Takneek*. Jaipur, University Book House.
11. Ray, G.L. (1991). *Extension Communication & Management*. Calcutta, Naya Prakash.
12. Raydu, C.S. (1993). *Media and Communication Management*. Bombay, Himalaya Publishing House.
13. Sandhu, A. S. (1993). *Textbook on agricultural communication, Process and Methods*. Culcutta, Oxford and IBH Pub. Co. Pvt. Ltd.
14. Singh, R.P., & Rana, G. (2005). *Communication*. New Delhi, Ravi Books.

HSC 201L Communication Process Lab

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	0 0 4 2

Syllabus:

1. Problem/need identification of a community
2. Preparation and use of graphic Aids (Chart/ Graph/ Flash Cards/ Poster Leaflet/ Folder)
3. Selection and use of extension methods and media

HSC 202 Family Clothing

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	4 0 0 4

Learning Outcomes:

Upon completion of the course students will be able to:

- Select fabrics and clothes for different age groups.
- Intelligently buy and care garments and house hold textile materials.
- Understand the consumer problems and their rights

Syllabus :**Unit I** Selection of fabric for different garments

Garment type and their selection- outer garments and under garments

Readymade and home made garments

Unit II Family clothing decisions

Steps and factors. Family wardrobe principles- community, budget, occasion, climate, occupation, interest, size, composition of the family, fashion, quality and accessories

Unit III Children's clothes

Selection of fabrics, design, colour for children garments according to age

Clothing for adolescence, middle age and old age

Factors influencing consumption of textiles

Unit IV Sociological, physical and psychological aspect of clothing

Definition and intelligent buying & care of table linen, towels and bathroom ensemble

Buying guidelines for bed sheet, pillow slips, blanket. Selection of upholstery, carpet and cushion materials

Unit V Problems of textile consumer, market practices that exploit consumer

Causes of exploitation

Concept and significance of consumer education

Labelling to help consumer in intelligent selection and care

Precautions to be observed during purchase of textile

Consumer redressal - consumer protection act, procedure for filing complaints

References :

1. Chahar(2007). *Consumer protection movement in India : problems and prospects*. New Delhi : Kanishka Publishers.

2. Lewis, D.S. & Bowers, M.G.(1960). *Clothing construction and wardrobe planning*. New York : Macmillan Book Company.
3. Tate, M.T., and Glisson, O. (1967). *Family clothing*. New York : John Wiley and Sons.
4. Wingate, Isabel B. (1965). *Textile Fabrics and Their Selection*. London : Prentice- Hall, INC.

HSC 202L Family Clothing Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	4	2

Syllabus:

Drafting, cutting and stitching of clothing for:

- Infant- Baby layette, Romper
- Children- Frock, Shirt/Bushirt, Shorts (Designing and construction with emphasis on growth, comfort, self help features)
- Adult- Blouse, Kalidar / Simple Kurta, Salwar / Churidar pyjama, Gent's pyjama

HSC 203 Family Dynamics

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	3	0	0	3

Learning Outcomes:

Upon completion of the course students will be able to:

- Analyze different aspects of marriage and family in the context of changing socio-economic scenario in the country
- Intelligently deal with economic and social issues
- Solve family disharmony issues and have positive attitude towards marital and family counseling

Syllabus :**Unit I** Institution of marriage

Definition and change in concept of marriage in India- past and present

Mate selection- theories and factors influencing.

Dating, courtship and engagement- definition, meaning and objectives

Marital adjustment- definition, factors affecting marital adjustment, areas of marital adjustment

Unit II Family in India

Definition, meaning and objectives

Types of families, their merits and demerits

Implications of family changes- female headed houses, single parent families. Families with working women

Unit III Problems and needs of family in specific situation

Families with chronically ill patients like cancer, AIDS and TB.

Families in extreme poverty conditions e.g. families in urban slums

Unit IV Causes and effect of family disharmony

Factor leading to family disorganization

Desertion and separation by the spouse, divorce and its consequences, laws related to divorce and separation.

Unit V Conflicts

Meaning and sources of conflict

Conflict resolution

Marriage counseling - need, importance and content of marital and premarital counseling

References :

1. Augustine, J.S. (1982). *The Indian Family in Transition*, New Delhi : Vikas Publishing House.

2. Bhatia, H. S. (1983). *Aging and society: A sociological study of retired public servants*. Udaipur Arya's Book Centre.
3. Chaudhary, J.N. (1988). *Divorce in Indian Society*. Jaipur : Printwell Publishers.
4. Desai, N. & Krishnaraj, M. (1987). *Women and society in India*. New Delhi: Ajanta Publications.
5. Devdas, T.S. (1979). *Hindu Family and marriage*, Madras: University of Botany.
6. Jain, B. S. (1984). *Indian society*. Jaipur: College Book Center.
7. Kapadia, K.M. (1990). *Marriage and family* (3rd Ed). Calcutta : Oxford University Press
8. MacIver & Page Charles H. (1952). *Society -An introduction analysis*. London : Macmillan Co. Ltd.
9. Mukherjee, R. (1979). *Indian Society*. Jaipur: College Book Center.
10. Rice F. Philips (1983). *Marriage and Family*. : N.J. : Prentice Hall
11. TISS. (1991). *Research in families with problems in India Mumbai*: BookPublisher T.I.S.S. 991Description: xvi,587 p..
12. Vidya, B. & Sachdeva, D.R. (1984). *Introduction to sociology*. New Delhi : Kitab Mahal.

HSC 203L Family Dynamics Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

Syllabus:

- Listing out laws related to marriage and family
- Preparation of resource file on family issues
- Preparation of interview schedule on dating, courtship and marriage
- Observational study of any one family life style – dual earner family, DINK Single parent, latch key children, adopted child, migrated, inter cast, inter religion family etc.

- Write an article on premarital and marital counseling
- Studying problems on families in different stages
- Planning programme for general wellbeing of family in different stages.

HSC 208 Guiding Child Behavior

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
3	0	0	3

Learning Outcomes:

Upon completion of the course students will be able to:

- Underline different rearing practices and their implications
- Analyze various behavioral problems and habit disorders under difficult circumstances and exceptionalities
- Analyze a problem, identify appropriate guidance strategies and effectively handle the problems

Syllabus :

Unit-I Different child rearing practices and their impact on personality formation-

- a) Feeding & weaning, toilet training, sleep pattern, hygienic practices and vaccination
- b) Disciplinary techniques

Unit-II Guiding the pre-school child

- a) Behavioural problems - sibling rivalry, aggression,
- b) Habit disorders - bed wetting, thumb sucking, nail biting, speech difficulty

Unit-III Child in social context

- a) Socialization and agents of socialization (Family, Peer group, School)
- b) Problems in social context - unmotivated to school, Isolation

Unit-IV Fostering adolescence development

- a) Stresses of adolescence - teenage pregnancy, heterosexual relations, homosexuality, masturbation
- b) Problem issues - career choices & aspiration, early and late maturation and drug addiction

Unit-V Exceptional children

- a) Meaning and types of exceptionality
- b) Guiding parents of exceptional children

References:

1. Harvey, D. (1975). *Baby Book*. London : Marshall, Cavendish.
2. Hetherington, E. Mavis & Parke, Ross D. (1993). *Child Psychology : A Contemporary View Point*. NY: McGraw Hill.
3. Heward, W. L. & Orlansky, M. D. (1992). *Exceptional Children*. NY: Meryll Publishers.
4. Kumar, R.N. (1993). *Baby & Child care*. New Delhi: UBS Publishers.
5. Lynch, Eleemon W & Lewis Rena B. (1988). *Exceptional children and adults - An introduction to special education*. Glenview: Scott Foresman and Co.
6. Schaefer, C.E. & Millman, H.L. (1981). *How to help children with common problems*. New York, NY: Van Nostrand Reinhold Company.
7. Spock, Benjamin (1976). *Baby and Child Care*. New York : Pocket books.

HSC 208L Guiding Child Behavior Lab**Max. Marks : 100****(CA: 40 + ESA: 60)****L T P C****0 0 2 1****Syllabus:**

- Recommendations for feeding, weaning and formula preparation
- Demonstration on sterilization of bottles
- Collection of articles and preparation of scrap book on problems related to child rearing and behavior
- Use of any two psychological tests

- Identifying and develop a theme / activity/ plan of action that need behavioral modification
- Survey to identify causes of morbidity and mortality in mother and children
- Survey to collect information regarding (a) Child rearing practices (b) feeding practices
- Case study of a child with behavioral problem

HSC 214 Nutrition for Vulnerable groups

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Have sufficient content – related knowledge base of nutritional requirements of vulnerable groups of society
- Apply the knowledge to design , implement and evaluate solutions to meet requirements of given set of vulnerable groups with available range of food sources

Syllabus :

Unit I a) Nutritional Education

Definition and concept; guide to good eating food and health, cooking and processing of food, feeding of girls and women and different phases (adolescence, pregnancy and lactation)

b) Nutrition during pregnancy

- a) Normal growth and developmental stages of pregnancy
- b) Physiological, biochemical and hormonal changes during pregnancy
- c) Nutritional risk factors in Pregnancy
- d) Nutritional needs and RDA during Pregnancy
- e) Complications of pregnancy and their dietary implications

Unit II Nutrition during lactation

- a) Physiology of lactation: Pro-lactin and let down reflex
- b) Nutritional requirements and RDA during lactation
- c) Factors affecting the needs and diet and feeding pattern
- d) Nutritional problem/ complications in lactation

Unit III Nutrition during infancy and for low birth weight infants

- a) Normal growth and development
- b) Growth chart
- c) Nutritional requirements
- d) Feeding and weaning practices; breast v/s artificial feeding

Unit IV Nutrition during childhood and adolescence

- a) Growth and development
- b) Nutrient needs and RDA
- c) Diet and feeding pattern
- d) Nutritional problems

Unit V Nutrition during old age

- a) Physiological changes during ageing
- b) Changes associated with ageing
- c) Nutrition related problems among the elderly
- d) Nutrition needs and dietary planning

References:

1. Gupta, S. (2006). *Text Book of Pediatric Nutrition*. New Delhi : Peepee Publishers and Distribution P. Ltd. Ed.
2. Khanna, K. Gupta, S. Mahna, R, Puri, S. Seth, R. and Passi, S.J.(1997).*Text book of Nutrition & Dietetics*. New Delhi: Phoenix Publishing House Pvt. Ltd..
3. Robinson, CH. and Lawler, MR. (1994). *Normal and Therapeutic Nutrition*. New York: Macmillan

Fifth Semester

Disciplinary Courses

HSC 301 Assessment of Nutritional Status

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Use skills in anthropometric measurements and assessment of nutritional status
- Conduct dietary surveys in the community
- Get Employment in different NGO's and government agencies working in the field of nutrition
- work independently in the field of community nutrition

Syllabus :

Unit I Definition of nutritional status, stages of nutritional status. Factors contributing to nutritional status of individual and community – food and food production, food distribution, economical, social, geographical, demographic and religious. Vital health statistics

Unit II Anthropometric assessments as a tool to assess nutritional status Weight, recumbent length, height, knee height, elbow breadth, and skin fold thickness- single and multiple. Waist and hip circumference, mid upper circumference, MUAMC and MUAMA

Unit III Anthropometry indices

Head and chest circumference for age, weight for age, weight for height, Brief introduction of reference data WHO, NCHS and ICMR. Evaluation of indices- WHO classifications

Unit IV Assessment of food consumption at community (Food account inventory, household record, list record) and individual (24 hours recall method, repeated 24 hrs., dietary history, food frequency, weighted food record and estimated food record) level

- Unit V** (a) Biochemical assessment for protein energy nutrition and deficiency of these nutrient vitamin A,D,E, thiamin, riboflavin, niacin, B6, folic acid, ascorbic acid, iron and iodine
- (b) Clinical assessment and biophysical assessment.

References:

1. Bamji, M.S., Rao, P.N., and Reddy, V. (1996) *.Text Book of Human Nutrition*. New Delhi:Oxford & IBH Publishing Co. Pvt. Ltd.
2. Gibson, R.S. (2005). *Assessment of Nutritional Status*. New Delhi:Oxford University Press.
3. Jelliffe, D. B. (1966). *Assessment of Nutritional Status of the Community*. W.H.O.

E-Resources:

- Anthropometry procedures Manual_CDC http://www.cdc.gov/nchs/data/nhanes_07_08/manual_an.pdf
- WHO Child Growth Standards - World Health Organization <http://www.who.int/child growth/standard>

HSC 301L Assessment of Nutritional Status Lab

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Syllabus:

1. Practice of anthropometry. Height, weight, BMI, MUAC, Head and Chest circumference, waist and Hip Circumference Measurement of skin fold thickness.
2. Determination of hemoglobin.
3. Dietary survey
4. Growth Chart

HSC 303 Dyeing, Printing and Finishing

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
3	0	0	3

Learning Outcomes:

Upon completion of the course, students will be able to:

- Analyze basic elements and principles of various dyes, prints and finishes.
- Extend and expand their ideas and creativity in designing
- Reason about eco-friendly aspects in relation to textile industries and provide solutions at multiple level of production

Syllabus :

Unit I Introduction to dyeing

- a) Classification, definition and chemical components
- b) Terminology and theory of dyeing
- c) Kinetics and mode of action of dyes
- d) Stages of dyeing

Unit II Introduction to Printing

- a) Definition, terminology of printing, difference between printing and dyeing
- b) Style of Printing: Direct, dyed, resist and discharge
- c) Method of Printing: Block, stencil, Screen, Batik, tie and dye and fabric Painting.
- d) Procedure of Printing

Unit III Introduction to finishes

- a) Definition, classification of finishes and importance of finishes
- b) Basic finishes used for preparation of fabric for dyeing and printing: Singeing, Desizing, Sizing, Bleaching, Scouring, Mercerization Carbonizing

Unit IV

- a) Special finishes Napping, flocking, water Repellent, wrinkle resistant, permanent press, calendaring, flame retardant and water absorbents.
- b) Textile dyeing and printing auxiliaries used for different textile processing.

Unit V

- a) After treatment for printed goods at cottage and Industrial level.
 - i. Baking
 - ii. Curing.
 - iii. Steaming.
- b) Industrial level practices for dyeing, printing and finishes.
- c) Legal and environmental concerns
- d) Environmental health and safety
- e) Laws and regulation.

References:

1. Alexander (1972). *Textile Products: Selection, use and care*. London, UK: Miffin Company.
2. Corbman, B.P. (1983). *Textiles: Fiber to Fabric* (6th ed.). New York, NY: McGraw Hill Publication.
3. Gohl, E. P. G. & Vilensky, L. D. (2005). *Textile Science* (2nd ed.). New Delhi, India: CBS Publishers.
4. Hall, A.J. (1980). *The standard Handbook of Textiles* (8th ed.). London, UK: Newness Butterworth.
5. Hess, K.P. (1959). *Textile fibers and their use* (6th ed.). New Delhi, India: Oxford and IBH Publication co.
6. Shenai, V. A. (1985). *Technology of Printing: Technology of textile processing* Mumbai, India: Sevak Publication.
7. Shenai, V. A. (1997). *History of Textile designs*. Mumbai, India: Sevak Publications.

8. Vidyasagar, P.V. (1998). *Handbook of textiles*. New Delhi, India: Mittal Publication.
9. Watson & William (1998). *Textile Design & Colour*. Mumbai, India: Bombay University Publication.

E-Resources:

- Textile fibers, dyes, finishes and processes
<https://www.scribd.com/document/25717442/Textile-Fibers-Dyes-Finishes-and-Processes>
- Textile dyeing and Printing
<https://www.scribd.com/doc/54185948/Textile-Dyeing-and-Printing>
- Classification of dyes
<https://www.textileschool.com/383/types-of-dyes-classification-based-on-chemical-structure/>
- Method of printing
<http://eacharya.inflibnet.ac.in/index.php/content/index/57206af18ae36c6781c073ae>
- Style of printing
<http://eacharya.inflibnet.ac.in/index.php/content/index/57206af18ae36c6781c073ac>
- Textile dyeing industry and environmental hazard
https://file.scirp.org/pdf/NS20120100003_72866800.pdf
- Impact of dyeing process on environment
http://cdn.intechopen.com/pdfs/41411/InTech-Textile_dyes_dyeing_process_and_environmental_impact.pdf
- Indian textile industry and environmental issues
<https://pdfs.semanticscholar.org/7761/d7fca806e9f6fb64d5b1e7aed3e44a032bbf.pdf>

HSC 310 Methods and Material for Child Study

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course, students will be able to:

- Explain characteristics and requirements of different groups of children
- Explain major methods and approaches of child study
- Design and create play materials and plan learning experiences for promoting various concepts and commutative skills in children

Syllabus :

Unit I Approaches and Methods

- a) Characteristics of childhood (emphasis on state of helplessness to gradual control over body.
- b) Importance and ways of meeting child's psychological needs to promote feeling of security, trust and acceptance.
- c) Approaches of child study – Baby Biographies, life span developmental approach.
- d) Methods of child study – Observation, Ethnographic study, case study, correlation study, experiments.

Unit II Stimulating Activities

- a) Activities for stimulation and sensory motor experiences – seeing, hearing, touching, feeling and movements.
- b) Activities to promote manipulation, concept formation, communication and perceptual discrimination.
- c) Language activities –
 - I. Music & songs
 - II. Rhymes
 - III. Stories

Unit III Activities and Materials

- a) Social science activities
- b) Science activities
- c) Mathematical activities
- d) Art and creative activities

Unit IV Other Materials

- a) Sand – Characteristics, values, materials required and teacher’s role
- b) Water – Characteristics, values, materials required and teacher’s role
- c) Puppetry – Characteristics – Values, kinds, script

Unit V Creative Drama

- a) Creative Drama and Role play
- b) Values
- c) Techniques involved in creative drama – rhythmic movements, pantomime, story building
- d) Basic staging techniques, use of light and sound effect

References :

1. Levine E. Laura (2011). *Child Development :An Active Learning approach*. Los Angeles: Sage Publications.
2. Papalia E. Diane (2004). *Human Development (9th ed.)*. New Delhi : Mc Graw Hill Education (India) Private Ltd.
3. Santrock W. J. (2008). *A tropical approach to Life -Span Development(3rd. ed)*. New Delhi : Tata Mc Graw-Hill Publication Company Ltd.

HSC 310L Methods and Material for Child Study Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	4	2

Syllabus:

1. Activities of Tearing, Cutting and Pasting
2. Modeling with clay, plasticine, dough, saw dust, straw, match sticks, rope, thick paper fold.
3. Preparation of tools for observation, Interview, case study
4. Preparation of puppets
5. Theme based dramatization
6. Display of bulletin board for picture talk
7. Develop riddles for language and concepts
8. Evaluate few stories
9. Prepare materials and activities to promote various concepts.
10. Plan field trip to – Institutions, parks, Zoo, Drams, TV station, Post office etc.
11. Collect traditional stories & folk songs from different parts of country
12. Compile outdoor and indoor games

HSC 315L Surface Ornamentation Techniques for Textiles Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	4	2

Learning Outcomes:

Upon completion the course, students will be able to:

- Plan and develop various textile designs using basic elements and principles of design

- Apply knowledge of different dyes, finishes, and style of printing to design various fabrics

Syllabus :

1. Process of designing
 - a) Collection of different motifs
 - b) Arrangements & placement of motif
 - c) Preparation of portfolio of different motifs arrangements and colour schemes using different themes and texture
2. Dyeing
 - a) Cotton yarn/fabric with direct dye by varying temperature, percentage shade and material liquor ratio. Cotton yarn with basic dyes by mordant, vat dyes, azoic dyes and reactive dyes
 - b) Woolen yarn with acid and basic dyes.
 - c) Dyeing of nylon with disperse dyes
3. Printing

Printing through different techniques: Tie and dye, Batik, Block, Stencil, Screen and fabric painting
4. Finishing
 - a) Identification of finishes
 - b) Study of labels pertaining to finish applied
 - c) Portfolio of various types of dyed, printed and finished fabric swatches

HSC 313 Textile Designing

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
3	0	0	3

Learning Outcomes:

Upon completion the course, students will be able to:

- Explore inspiration sources of design for basic sketching and painting

- Differentiate and develop various types of motifs
- Use creative and technical skills for designing textiles with special emphasis on applied design
- Use concept, theories and specification of color in selection of apparels for men, women and children

Syllabus :

Unit I Design Analysis

- a) Structural and applied design variation in fiber, yarn and fabric construction, embroidery, dyeing, printing and finishing.
- b) Introduction to standard textile fabric terms- cambric, denim, gabardine, poplin and velvet etc

Unit II Elements and principles of designs in relation to textiles

- a) Principles of designs – harmony, balance, proportion, rhythm and emphasis
- b) Elements of designs – line, form, colour and texture

Unit III History of textile design

- a) Classification of textile design : woven and printed
- b) Design Inspiration and sources of design for basic sketching and painting: nature, religion and methodology, crafts, arts, architecture and other methods of getting designs

Unit IV Process of Designing

- a) Textile motifs
- b) Motif development : geometric, simplified, stylized, naturalized, abstract and ornamental
- c) Textile symbols and motif repeat and patterns, big and small motifs, enlargement and reduction, growth of a motif, combining motifs, all over patterns

Unit V Concept of colours and design

- a) Eye: its parts, Perception of an eye
- b) Colour Specification : CIE and Munsell colour system

- c) Theories of colour
- d) Colour and its defects- colour blindness and its types
- e) Effect of colour schemes on textile designing
- f) Role of colours in selection of men , women and children wear

Referencesd:

1. Cole, D. (2007). *Patterns new surface design*. London: Laurence King Publication,
2. Corbman, B.S (1985). *Textile fiber to fabric*. New Delhi: Mc. Graw Hill Publication
3. Hess, K. P. (1959). *Textile fibers and their use*. New Delhi: Oxford and IBH Publication company
4. Naik S. D. and Wilson . J. (2006): *Surface designing and Textile fabrics*. New Delhi: New age international (P) Limited Publishers
5. Shenai, V. A. (1997). *History of Textile Designs*. Mumbai: Sevak Publications
6. Terry, A. G. (1979). *Printed textile A guide to creative design fundamentals*. New Jersey, England: Prentice hall inc.
7. Vidyasagar, P.V.(1998). *Handbook of textiles*. New Delhi: Mittal Publication
8. Watson and William. (1998). *Textile Design and Colour*. Mumbai: Bombay University Publication

E–Resources:

- Elements and principles of design-Slide share, <https://www.slideshare.net/admecinstitute/principles-of-design-30520900>
- Indian Heritage - Textiles of India, <http://www.indian-heritage.org/alangaram/textiles/textiles.html>
- How colour notion works – Munsell color system, <https://munsell.com/about-munsell-color/how-color-notation-works/>

Sixth Semester
Disciplinary Courses
HSC 302 Diet Therapy

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Identify the nutritional needs in various diseases
- Formulate therapeutic diet according to disease using principles of diet therapy
- Apply the knowledge of therapeutic diet for counseling of patients
- Demonstrate the nutritional care in community

Syllabus :

Unit I Concept and objectives of diet therapy

- a) Team approach to nutritional care
- b) Therapeutic adaptations of normal diet

Unit II Dietary management in febrile and gastro intestinal disorders -

- a) Typhoid
- b) Tuberculosis
- c) Diarrhoea
- d) Constipation
- e) Peptic Ulcer

Unit III Dietary management in weight related and liver disorders

- a) Obesity
- b) Underweight
- c) Viral hepatitis
- d) Cirrhosis of liver

Unit IV Dietary management in renal disorders and hypertension

- a) Acute glomerulo- nephritis
- b) Ca oxalate calculi
- c) Hypertension

Unit V Dietary management in chronic degenerative disorders

- a) Atherosclerosis
- b) Diabetes mellitus

References:

1. Antia, F.P. & Abraham, P. (1973). *Clinical dietetics and nutrition*. New Delhi: Oxford University Press.
2. Khanna, K., Gupta, S., & Passi, S.J. (1997) . *Textbook of Nutrition and Dietetics* ., New Delhi : Phoenix Publishing House Pvt. Ltd.
3. Passmore, R. ., & Eastwood, M. A.(1986). *Davidson and Passmore Human Nutrition and Dietetics* .Churchill Livingstone.
4. Robinson, C.H., & Lawler, M. (1982). *Normal and Therapeutic Nutrition, New Delhi: Oxford IBH Publishing Co.*
5. Sharma, S. (2000). *Human Nutrition and Meal Planning*. New Delhi: Jnanda Publishers
6. Srilakshmi, B. (2002). *Dietetics: New Age Interantional (p) Ltd.*
7. Swaminathan, M.(1985). *Fundamentals of Food and Nutrition, (Vol.II)*. Bangalore: **Bangalore** Printing and Publishing Co Ltd
8. Williams, S.R.(1993). *Nutrition and Diet Therapy*. St. Louis:Times Mirror Mosby College Publishing.

E-Resources:

- Indian chronic kidney disease guidelines
http://isn-india.org/images/CKD_1.pdf
- Dietary Guidelines for Indians
<http://ninindia.org/DietaryGuidelinesforNINwebsite.pdf>
- ICMR guidelines for management of type 2 diabetes 2018
<https://medibulletin.com/wp-content/uploads/2018/05/ICMR.diabetesGuidelines.2018.pdf>

HSC 302L Diet Therapy Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

Syllabus :

- Planning and Preparation of diets for -
- i. Acute fever (full fluid diet)
 - ii. Chronic fever (soft diet)
 - iii. Diarrhoea
 - iv. Constipation
 - v. Peptic ulcer
 - vi. Obesity
 - vii. Underweight
 - viii. Viral hepatitis
 - ix. Cirrhosis
 - x. Acute glomerulonephritis
 - xi. Ca oxalate calculi
 - xii. Hypertension
 - xiii. Diabetes mellitus (using exchange lists)
 - xiv. Atherosclerosis

HSC 304 Early Childhood Education

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Explain significance of early childhood years, historical development and philosophical ideas related to early childhood education

- Get proficiency in planning programmes and curriculum including various components to promote all round development of young children
- Analyze problems , identify various contemporary issues in ECE and plan innovations

Syllabus :

Unit I (a) Significance and objective of ECE

(b) Historical overview of ECE in India and Abroad

(c) Different type of programmes currently offered : objectives of the programme, routine and target group covered by each of the following- Balwadi, Anganwadi, Nursery school, kindergarten, montessori, mobile creche, ICDS, Play group, creche and day care, laboratory nursery school

Unit II Organization and management of ECE Centre

a) Material Management – Place/building/space-Plan for various activities, space allotment of outdoor and indoor

b) Furniture / fixtures/ equipments – criteria for selection, functional utility, maintenance, low cost alternatives

c) Personnel management: Selection, qualities, roles, duties and responsibilities

Unit III Curriculum and programme planning

a) Foundations of curriculum development – children’s background and experiences, need for movement, exploration, discovery, expression, achievement, success and recognition, development norms & tasks, cultural expectations

b) Principles of programme planning – from known to unknown, simple to complex, concrete to abstract, Balance between individual and group activity, indoor and outdoor, quiet and active, guided and free activities

- c) Integrated learning approach or project method: Meaning, advantages and planning

Unit IV Pre-school curriculum

- a) Long and short term planning, model lesson plan for a day
- b) Activities in pre school science, music, mathematics, play, social science, language, creative art activities and environmental studies – objectives and role in all round development of child
- c) Alternative to home work such as observations, exploration, experimentations, reporting orally, picture presentations
- d) Evaluation of daily work and reporting to parents

Unit V Understanding, importance and management

- a) Child's first day in nursery school
- b) Laying foundations for security
- c) Observation in ECE Centre
- d) Parents involvement in ECE
- e) Integrated and segregated programme for children with special need

References:

- Grewal, J.S. (1995). *Early Childhood Education*. Agra: National Psychological Corporation.
- Lawton, J.T. (1988). *Introduction to Childcare & Early Childhood Education*. London: Scott Freeman Co.
- Morrison, G.S. (1976). *Early Childhood Education Today*. USA: Merrill Publications.
- Read, K.H. (1996). *Nursery School Relationship Laboratory*. Calcutta: Oxford and IBM.
- Swaminathan, M. (1984). *Play Activities for Young Children*. New Delhi: UNICEF.

E-Resources:

- पाश्चात्य शैक्षिक विचार व विचारक 4MB
<https://drive.google.com/open?id=0Bwk5FIsI0ctxQmJYQXJhVkJYWHM>
- अध्यापन-अधिगम तथा मूल्यांकन 2MB
<https://drive.google.com/open?id=0Bwk5FIsI0ctxSlg1d2RoFRzYjg>
- पाठ्यचर्या तथा अनुदेश 17MB
<https://drive.google.com/open?id=0Bwk5FIsI0ctxejNMUFZxbTl6MGc>
- अधिगम के लिए मार्गदर्शन 6MB
<https://drive.google.com/open?id=0Bwk5FIsI0ctxRXNHR011T3JWafU>

HSC 304L Early Childhood Education Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Syllabus :

- Observation of children in nursery school in different situations.
- Plan activities for ECE centre: list objectives, analyze tasks to achieve goals, select and organize instructional and learning materials, teacher's role, and preparation of evaluation sheet.
- Preparation of materials for reading and writing readiness and different activities in Pre School.
- Preparation of stuffed toys, pictures books, encyclopedia and dictionaries.
- Micro teaching – peer group teaching used to develop teaching skills.
- Assisting Nursery school teacher in different activities.
- Learning to maintain different types of records and registers.
- Plan project method based lesson.
- Plan activities which children can do at home.

HSC 306 Fashion Dynamics and Illustration

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
3	0	0	3

Learning Outcomes:

Upon completion of the course students will be able to:

- Recognize basic concepts of fashion dynamics, fashion movement and its development.
- Interpret and learn to operate practices involved in fashion business.
- Find out designers of international and national fame and explore their contribution to the fashion of today
- Design and sketch fashion illustrations for different purposes

Syllabus :

Unit I The nature of fashion

- a) Definition & its importance in fashion business
- b) The terminology of fashion : style, fashion, design, taste
- c) Components of fashion : silhouette, details, colour, fabric ,texture, seams, trims
- d) The intangibles of fashion ; group acceptance, change, reflection of time
- e) Principles of fashion adoption

Unit II Fashion development: an overview of

- a) History of fashion industry & retailing
- b) Retail expansion in early twentieth century
- c) Present status of fashion couture
- d) Categories of fashion industry : a brief overview of
 - (i) Primary level
 - (ii) Secondary level

Unit III Fashion change and consumer acceptance

- a) Fashion evolution: fashion cycles and length of cycle
- b) Consumer groups: fashion leaders and followers
- c) Theories of fashion adoption: downward theory, mass market theory, upward theory
- d) Motives for fashion buying: fashion selection

Unit IV Fashion environment & its movement

- a) Environment of fashion: geographic, demographic, psychographic & behavioral
- b) Factors affecting fashion & its change: accelerating factors, retarding factors & recurring fashion

Unit V Fashion research design and analysis

- a) Fashion forecasting: market research, evaluating the collections
- b) Source of fashion information
- c) Development of fashion line /range
 - (i) Design source
 - (ii) Interpreting theme / range
 - (iii) Scope of line
 - (iv) Line portfolio

References:

1. Abling, B. (1993). *Fashion Sketchbook*. New York: Fairchild publication
2. Abling, B. (2017). *Fashion Flats and Technical Drawing*. New York: Bloomsburry Publication
3. Abling, B. (2nd ed.). (2005). *Marker Rendering for fashion, Accessory and Home Fashion*. New York: Fairchild Publication.
4. Castelino, M. (1994). *Fashion Kaleidoscope*. Calcutta: Rupa and co.

5. Diamond, J. & Diamond, E. (V ed.). (2013). *The World of Fashion*. New York, NY: Bloomsbury Publishing Inc.
6. Frings, G. S. (1999). *Fashion from Concept to Consumer*. New Jersey: Prentice Hall
7. Ireland, P.J. (1995). *Fashion Design Illustration for Children*. London: B. T. Batsford Ltd.
8. Ireland, P.J. (2005). *Figure Templates for Fashion Illustration*, Singapore: Page One Publishing Pvt.Ltd.
9. Leach, R. (2012). *The Fashion Resource Book : Research for Design*. London: Thames & Hudson Ltd.
10. Rouso, C. (2012). *Fashion Forward : A Guide to Fashion Forecasting*. New York: Fair child Books Inc.
11. Stone, E. (2004). *The Dynamics of Fashion*. New York: McGraw Hill Book Company
12. Tain, L. (3rd ed.). (2010). *Portfolio Presentation : for Fashion Designers*. New York: Fairchild Books Inc.

HSC 306L Fashion Dynamics and Illustration Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	4	2

Syllabus :

- (i) Sketching of different action croquei (front, back & side view) for child, male & Female
- (ii) Garment and Garment Details
 - Necklines and collars
 - Sleeve details
 - Frills, fringes and gathers, cowls and cascades
 - Hemlines and insertion
 - Lacings, Maura me and patch work
 - Pleats, quelling and ties
 - Shirring , smocking, hip openings, fastening
 - Yokes, tucks and tassels
 - Shirts and pants
 - Suits, blouses, coats and jackets

- (iii) Sketching of Accessories
 - Hats and Headgear.
 - Sunglass
 - Footwears
 - Bags and purses
 - Jewellery.
- (iv) Basic Rendering techniques
 - Colour matching using different media – charcoal, crayons, pen markers, brushes, paper
 - Pattern & texture – checks, gingham, plaids, stripes
 - Reducing a print
 - Shading
- (v) Theme Rendering
 - Casual wear
 - Sports wear
 - Executive wear
 - Night wear
 - Bridal wear
 - Evening wear
 - Beck wear
 - Traditional wear

HSC 314 Welfare Programmes

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
3	0	0	3

Learning Outcomes:

Upon completion of the course students will be able to:

- Discuss welfare services for family and children in India
- Interpret various types of services to meet the needs of family and children

- Analyze the institutional services for women and children; old age and children with special need
- Summarize the role of international agencies in child welfare

Syllabus :

Unit I Concept of welfare services

- a) Meaning and definition of welfare services
- b) Historical orientation of family and child welfare agencies
- c) Categories of child Welfare services-supportive, protective and supplementary
- d) Maternal and child health services
- e) Nutrition services

Unit II Institutional Services for Women and Children

- a) Recreational institutions for children – Bal Bhawan and Holiday Homes
- b) Institutional Services for women and children in distress – Short stay homes, SOS village, rescue homes

Unit III Agencies and Services for aged

- a) Services for the aged – Day Care Centres, old age homes, old age pension schemes
- b) Agencies for the aged – Help age India, Senior Citizens' association in Major cities, Grant –in-aid programme

Unit IV International organizations

- a) Role of international agencies in child welfare: WHO, ILO, UNICEF, FAO, UNESCO -international NGO-AMI, CARE, IUCW, ICCW

Unit V Services for Children with special need & Youth

- a) Blind and deaf
Physically handicapped
Mentally retarded
Juvenile delinquents
- b) Programmes for Youth

References:

1. Alfred, K. (1980). *Child Welfare Services* . New York : Mc-Millan Publishers.
2. Choudhary, D.P. (1985). *Child Welfare Development*, Delhi: Atma Ram & Sons .
3. Fonseca, M.B. (1991). *Counselling for Marital Happiness*, Bombay : Manaktalas .
4. Verma, V.S. & Singh, M. (1988). *Legal Rights for Women and Families* . New Delhi: Women's Legal Aid Centre.

Discipline Elective – I**HSC 309 Introduction to Work Study****Max. Marks : 100****(CA: 40 + ESA: 60)****L T P C****4 0 0 4****Learning Outcomes:**

Upon completion of the course, students will be able to:

- Analyze changes in human body at work
- Analyze and reason out concept of Ergonomics and its applications to develop user-centered approach
- Develop human centered approach to work and workplace designing
- Analyze the indoor climate components for ergonomic designing

Syllabus:**Unit I** Work Study

- a) Components of work study- Time study and method study
- b) Work study techniques - Formal and informal
- c) Mundell's classes of change

Unit II The Worker- Costs of work

- a) Affective component- Motivation
- b) Cognitive component- Guilford's model of intellect
- c) Temporal component - Work curve, rest periods and fatigue
- d) Physical component- Principles of biomechanics, indicators of physical stress (heart rate, VO2 max), work physiology (static and dynamic work)

Unit III The Work

- a) Functional design for seated and standing workers
- b) Workstation analysis- user- machine- environment interface

Unit IV Indoor Climate in Workplace

- a) Illumination- Principles of good lighting
- b) Noise level and their control in workplaces
- c) Quality of air – Humidity and temperature

Unit V Ergonomics – Human factors

- a) Meaning, areas of study in ergonomics, criteria to assess ergonomic fit
- b) Relationship between optimal design and performance
- c) Man machine environment system

References:

1. Bridger R.S. (2009). *Introduction to Ergonomics*. New York :Mc Graw Hill Inc.
2. Galer I. (1987). *Applied Ergonomics Handbook (2nd ed.)*. London:Butterworth & Co. Publications Ltd .
3. Salvendy G. (2006). *Handbook of Human Factors and Ergonomics*. New York:John Wiley & Sons.
4. Sanders M., McCormick E. (1993). *Human Factors in Engineering and Design*. New York:McGraw Hill.

E-Resources:

- Human Factors
https://www.fac.ksu.edu.sa/sites/default/files/human_factors.ppt

HSC 316 Behaviour Change Communication

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to

- State the meaning, theories and principles of behaviour change communication
- Explain Steps necessary in designing a behaviour change communication strategy
- Design effective communication strategies

Syllabus :

Unit I Introduction to Behavior Change Communication

- a) Defining behaviour change, behaviour change communication
- b) The behaviour change process
- c) Behaviour change theories
- d) Guiding principles for BCC
- e) Characteristics of effective behaviour change communication programs

Unit II Designing Behavior Change Communication Programs

- a) Defining the problem
- b) Identify target audience
- c) Conduct formative assessment
- d) Segment target population
- e) Define communication and behaviour change objectives
- f) Select communication channels
- g) Design key messages and materials
- h) Pre-test materials and Messages

Unit III Dissemination, implementation, monitoring and evaluation of BCC programs

- a) Message dissemination
- b) Monitoring of BCC programs
- c) Evaluation and re-planning
- d) Evaluation of message effect

Unit IV Designing a Communication Strategy

- a) Steps in designing a communication strategy
- b) Key elements of a communication strategy

Unit V 7 C's of Effective Communication

- a) Command attention
- b) Cater to the heart and head
- c) Clarity of message
- d) Consistency checks
- e) Communicate a benefit
- f) Create trust
- g) Call for action

References:

1. Gainforth, Brown, West, Campbell, & Michie (2014). ABC of Behaviour Change Theories. Silverback Publishing,.ISBN 1291886672, 9781291886672
2. Gainforth, Brown, West, Campbell, & Michie (2014). The Behaviour Change Wheel: A Guide to Designing Interventions. Silverback Publishing, ISBN 1291846050, 9781291846058
3. McKee,Becker& Bockh (2014). Social and Behavior Change Communication. Wiley Online Library.Online ISBN: 9781118505328, Print ISBN: 9781118505311

4. Woods N., Lisa (2006). Behaviour Change Communication In Emergencies: A Toolkit. United Nations Children’s Fund.. ISBN 99946-896-1-4

E-Resources:

Introduction to Behaviour Change Communication. Retrieved from <https://slideplayer.com/slide/5727280/>

Health Communication Capacity Collaborative (n.d.).Designing a Social and Behavior Change Communication Strategy. Retrieved from <https://sbccimplementationkits.org/courses/designing-a-social-and-behavior-change-communication-strategy/>

IFRC (n.d.).Introduction to Behaviour Change Communication. Retrieved from

<http://www.rcrc-resilience-southeastasia.org/document/introduction-to-behavior-change-communication-bcc/>

HSC 317 Community Health Management

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to

- Understand the concept of health from the individual and community perspective
- Know the factors affecting health and nutritional status of individual and community and promoting aspects to improving community health.

Syllabus :

Unit I Health and dimensions of health

Physical health, mental health, emotional health, spiritual health and social health. Characteristics of mental health. Positive health versus absence of diseases

Unit II Community and its organization

Concept of community ,types of community, factors affecting health of the community-environmental, social, cultural, dietary, organizational, economic, political.

Vulnerable groups/ needs of specials population

Unit III Communicable and infectious Disease control

Nature of communicable and infectious diseases, infection, contamination, disinfections, decontamination, transmission-direct and indirect, vector born disease, infecting organisms and causative agents. Principles of disease control

Unit IV Community Water and Waste management

Importance of water to the community, etiology and effects of toxic agents, water born infectious agents, sources of water, safe drinking water/potability and tests for potability.

Community waste and waste disposal-sewage disposal and treatment, solid waste and disposal, liquid waste disposal.

Unit V Life style and Community health

Preventive and promotive aspects, public education and action, alcohol, cigarette smoking, drugs, AIDS,STD diet and chronic diseases.

References:

Clark,J,J Henderson,J.(1983):Community Health,Churchilli Livingstone.

Park, K. (2017):Park's Textbook of Prevention and Social Medicine 24Th Edition.Banaingstone. Bhanot Publishers,Jabalpur.

E-Resources:

Infectious disease retrieved from <https://www.who.int>

factors affecting health of the community retrieved from <https://www.slideshare.net>

Discipline Elective –II

HSC 311 Nutritional Biochemistry

Max. Marks : 100

(CA: 40 + ESA: 60)

L	T	P	C
4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to:

- Get thorough knowledge about the metabolism of nutrients and their functions in the body
- Gain insight into functions and interrelationship between nutrients and their importance in the maintenance of health
- Estimate some nutrients, detect adulteration in foods,
- Assess the chemical characteristics of foods

Syllabus :

Unit I Mitochondrial respiratory chain, Oxidative phosphorylation

Elementary concepts of intermediary metabolism

Unit II Digestion and absorption of carbohydrate, lipids & proteins, glycolysis, glycogen synthesis and break down, TCA cycle, regulation of blood glucose level

Unit III Fatty acid Beta oxidation and Denovo bio-synthesis, Metabolism of cholesterol, Ketone bodies, Ketosis

Unit IV Urea cycle, various levels of organization of protein structure, Essential Amino acids An introductory concept of Nucleic acid metabolism, Bio-chemical changes in PEM, and Gout

- Unit V**
- (a) Biochemical role of minerals: Calcium, Phosphorus, Iron, Iodine, Copper, Zinc
 - (b) Biochemical role of vitamins :A, D, E, K Thiamine, Riboflavin, Niacin, Pyridoxine, Biotin, Folic acid, vitamin B, vitamin C
 - (c) Biochemical roles of hormones: Insulin, Glucagon, epinephrine, thyroid hormone, estrogen and testosterone

References:

1. Conn, E. E. & Stump, P. K. (1987). *Outlines of Bio-chemistry*. New York: John Wiley & Sons Inc.
2. Deb, A. C. (1998). *Fundamentals of Bio-chemistry*. Calcutta: New Central Book Agency,.
3. Martin, D.W., Mayes, P.A. & Rodwell, V.W. (2003) *Harper's Review Bio-chemistry*. USA: Lange Medical Publication. Los Altos California.
4. Pant, M. C. (2005) *.Essential of Bio-chemistry*. Meerut : Kedarnath Ramnath & Co..
5. Plummer, D.T. (2017). *An Introduction to Practical Biochemistry*. New Delhi : McGraw Hill Education.
6. Rao, A.V.S.S.R. (2006). *Text Books of Bio-chemistry*. Tahuku (AP) : UBS Publishers Distributers Pvt. Limited.
7. Sharma S. (1993). *Practical Biochemistry*. Jaipur : Classic Publishing House.
8. Sharma, S. (2007). *Experiments and Techniques in Biochemistry*. New Delhi : Galgotia Publishing.
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HSC 311L Nutritional Biochemistry Lab

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	0 0 2 1

Syllabus :

1. Qualitative analysis of main constituents of wheat flour and milk
2. Analysis of oils or fats: Saponification Number and Iodine Number
3. Determination of ascorbic acid in food, by titration
4. Qualitative determination of calcium, phosphorus, and iron in a given sample
5. Amino acid separation by paper chromatography
6. Detection of common adulterants in the food stuff

HSC 319 Ergonomics and Space Management

Max. Marks : 100	L T P C
(CA: 40 + ESA: 60)	4 0 0 4

Learning Outcomes:

Upon the completion of this course, the students will be able to

- Understand the concepts of Ergonomics and Proxemics in context to each other
- Apply ergonomic approaches to designing of spaces and products
- Evaluate different workspaces and furniture on functional grounds

Syllabus:

Unit I

- a) Concept and Importance of Ergonomics
- b) Proxemics and its applications
- c) Anthropometrics- Concept and Applications in design

Unit II

Design Techniques in Space Planning and their applications

1. Proportioning Systems- The Golden Section and Fibonacci Series
2. Oriental Grid Systems
3. Corbusier.s Modular System

Unit III

Ergonomic Approaches to the design of

1. Residential Buildings
2. Office Layouts
3. Computer Workspaces
4. Equipments
5. Laboratories

Unit IV

1. Principles of Ergonomic Interior Design
2. Ergonomic Assessment of Workspace Design- Reactive & Proactive Approach
3. Multi-Unit and Adjustable Furniture

Unit V

1. Landscape Designing on aesthetic and functional grounds
2. Principles of Sustainable Workplace Design
3. Furniture Design Guidelines for Fit & Function

References:

1. Openshaw, S. (2006). Ergonomics and Design: A Reference Guide. Allsteel Inc.
2. Soares, M.M. & Rebelo, F. (2016). Ergonomics in Design: Methods and Techniques. CRC Press

3. Postell J. (2012). Furniture Design. John Wiley & Sons
4. Soares, M.M. & Rebelo, F. (2018) (Ed). Advances in Ergonomics in Design. Springer, Cham
5. Pheasant, S. & Haslegrave, C.M. (2005). Bodyspace: Anthropometry, Ergonomics and the Design of Work. III ed., CRC Press
6. Penick, P. (2013). Lawn Gone!. Ten Speed Press

HSC 319L Ergonomics and Space Management Lab

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	0	0	2	1

1. Ergonomic Evaluation of Computer Workstation
2. Anthropometric considerations for seated and standing workers
3. Assessment of User-Chair fit: Comparison of at least two types of chairs
4. Postural Analysis of seated and standing workers
5. Analysis of workplace factors- Illumination, Noise levels, Air Quality
6. Analysis of ZCR (Zone of Comfortable Reach) for seated and standing workers

HSC 324 Programme Planning and Management

Max. Marks : 100	L	T	P	C
(CA: 40 + ESA: 60)	4	0	0	4

Learning Outcomes:

Upon completion of the course students will be able to

- State the meaning, nature and importance of programme planning
- Explain programme planning process and extension management
- Design plan of work for need based program
- Apply techniques of participatory planning- RRA, PRA and PLA

Syllabus :**Unit I** Programme Planning in Extension

- 1) Meaning and nature of programme planning
- 2) Importance of programme planning
- 3) Need of Programme Planning
- 4) Abilities needed by Planners

Unit II Programme planning process

- 1) Community Study
- 2) Local Leaders and Participation
- 3) Need Assessment
- 4) Framing Objectives
- 5) Plan of work
- 6) Programme Implementation
- 7) Evaluation
- 8) Reconsideration

Unit III Participatory planning

- 1) Concept and importance of participatory planning
- 2) Process of participatory planning
- 3) Techniques of participatory planning- RRA, PRA and PLA and their application in extension approaches of participatory planning – cooperative, democratic, bottom up and down

Unit IV Extension Management

- 1) Concept and meaning of management and extension management
- 2) Principles and importance of extension management
- 3) Competencies required by extension managers
- 4) Problems in extension management

Unit V Extension Management process

- 1) Planning
- 2) Organizing
- 3) Staffing
- 4) Directing
- 5) Communicating
- 6) Co-ordination
- 7) Controlling
- 8) Monitoring
- 9) Evaluation.

References:

1. Adhikary, MM. (2006). Participatory Planning & Project Management in Extension Sciences. Agrotech Publ.Academy.
2. Burton, G. & Hanab, T. (1997). Management Today, Tata Mc Graw Hill Publishing Company, New Delhi.
3. Chandan, J. S. (1997). Management- Concepts and Strategies. Vikas Publishing House, New Delhi.
4. Dale, R. (2004). Evaluating Development Programmes and Projects. New Delhi, Sage Publications.
5. Govind, S. Tamilselvi, G. & Meenambigai, J. (2011). Extension Educational and Rural Development, Agrobios, Jodhpur.
6. Koontz & Heinz, W. (1990). Essentials of Management, McGraw-Hill, New Delhi.
7. Kumar & Hansra. (1997). Extension Education for Human Resource Development. New Delhi: Concept Publishers.
8. Mikkelsen, B. (2002). Methods for Development Work and Research. New Delhi, Sage Publications
9. Prasad, M.L. (1999). Principles and Practice of Management, Sultan Chand & Sons, New Delhi.

10. Rajpurohit, R, Sharma, S. & Gupta, A. (2013). Management, Ajmer book company Publishers, Jaipur.
11. Ray, G.L. (2006). Extension Communication and Management. Kalyani Publishers, New Delhi.
12. Sandhu, A.S. (1994) Extension Programme Planning. Oxford & IBH Publishing Company Private Limited, New Delhi.
13. Supe, S.V. (2018). Introduction to Extension Education. Oxford Publishers, New Delhi.
14. Tripathi, P.C & Reddy, P.N. (1993). Principles of Management, Tata McGraw Hill, New Delhi.

E-Resources:

Extension Program Planning: Meaning, Definition, Objectives, Importance and principles

<https://epgp.inflibnet.ac.in/ahl.php?csrno=827>

Steps in Program Planning Retrieved from

<https://epgp.inflibnet.ac.in/ahl.php?csrno=827>

PRA I and PRA II <https://epgp.inflibnet.ac.in/ahl.php?csrno=827>

Planning and Developing Extension Programme,

<http://egyankosh.ac.in/handle/123456789/9171>

HSC 324L Programme Planning and Management Lab

Max. Marks : 100
(CA: 40 + ESA: 60)

L	T	P	C
0	0	2	1

- 1) Assessing needs and problems of a target group in a community
- 2) Development of a plan of action for the problem identified
- 3) Conducting the planned programme
- 4) Evaluation and reporting
- 5) Suggestion and follow-up.
