NEP FYUGP CURRICULUM

HOME SCIENCE HONOURS/

HOME SCIENCE HONOURS WITH RESEARCH PROGRAMME

SUBJECT CODE = 08

FOR UNDERGRADUATE COURSES UNDER RANCHI UNIVERSITY, RANCHI

Implemented w.e.f.
Academic Session 2025-26 & onwards

UNIVERSITY DEPARTMENT OF HOME SCIENCE
RANCHI UNIVERSITY, RANCHI, PIN -834008, (Jharkhand)

Ref. No. RU/PG/17:SC-57/2026 **Date** 31.8.2026

Members of Board of Studies of NEP Curriculum in Home Science for Four-Years Undergraduate Programme (FYUGP)

Papers to be restructured for FYUGP under provisions of NEP 2020

To be implemented from 2025-26

Sl. No.	Name, Designation and Affiliation	Present as
1.	Dr. Renu Kumari, Head, Univ. Department of Home Science, Ranchi University Ranchi	Chairperson
2.	Dr. Renu Bose, Associate Professor, Vinoba Bhave University, Hazaribagh	External Member
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15.	Dr.Usha Kumari, HOD & Assistant Professor, Sanjay Gandhi College Pandra, Ranchi	Member
16.	Rajni Sharma	Alumni

Approval by the Members of the NEP Implementation and Monitoring Committee of Ranchi University, Ranchi

The Curriculum of Bachelor's Degree (Honours)/ (Honours with Research) has been approved by the NEP Implementation and Monitoring Committee of R.U., duly forwarded by the Head of the Department; it will be offered to the students of the 4-year Undergraduate Programme (FYUGP). It is implemented from the 1st Semester of the Academic Session 2025-26 and onwards.

10/9/25 10/09/25 10/9/2025

Anushka Rani 10/09/2025 10/09/25 10/9/25

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HIGHLIGHTS OF FYUGP CURRICULUM

PROGRAMME DURATION

- The Full-time, Regular UG programme for a regular student shall be for a period of four years with multiple entry and multiple exit options.
- The session shall commence from the **1st of July**.

ELIGIBILITY

- The selection for admission will be primarily based on the availability of seats in the Major subject and marks imposed by the institution. Merit point for selection will be based on marks obtained in the Major subject at Class 12 (or equivalent level) or the aggregate marks of Class 12 (or equivalent level) if the Marks of the Major subject is not available. Reservation norms of the Government of Jharkhand must be followed as amended in times.
- UG Degree Programmes with Double Major shall be provided only to those students who secure a minimum of 75% overall marks or 7.5 CGPA or higher.
- Other eligibility criteria, including those for multiple entry, will be in light of the UGC Guidelines for Multiple Entry and Exit in Academic Programmes offered in Higher Education Institutions.

ADMISSION PROCEDURE

- The reservation policy of the Government of Jharkhand shall apply in admission and the benefit of the same shall be given to the candidates belonging to the State of Jharkhand only. The candidates of other states in the reserved category shall be treated as General category candidates. Other relaxations or reservations shall be applicable as per the prevailing guidelines of the University for FYUGP.

VALIDITY OF REGISTRATION

- Validity of a registration for FYUGP will be for a maximum of **Seven years** from the date of registration.

ACADEMIC CALENDAR

- An Academic Calendar will be prepared by the University to maintain uniformity in the UG Honours/ Honours with Research Programmes and PG Diploma Programmes, running in the colleges under the university (Constituent/Affiliated).
- **Academic Year:** Two consecutive (one odd + one even) semesters constitute one academic year.
- **Semester:** The Odd Semester is scheduled from **July to December and** the Even Semester is from **January to June**. Each week has a minimum of 40 working hours spread over 6 days.
- Each semester will include Admission, coursework, conduct of examination and declaration of results, including semester break.
- To undergo an 8-week summer internship/ apprenticeship during the summer camp, the Academic Calendar may be scheduled for academic activities as below:
  a) Odd Semester: **From the first Monday of August to the third Saturday of December**
  b) Even Semester: **From the first Monday of January to the third Saturday of May**
- An academic year comprising 180 working days in the least is divided into two semesters, each semester having at least 90 working days. With six working days in a week, this would mean that each semester will have 90/ 6 = 15 teaching/ working weeks. Each working week will have 40 hours of instructional time.
- Each year, the University shall draw out a calendar of academic and associated activities, which shall be strictly adhered to. The same is non-negotiable. Further, the Department will make all reasonable endeavours to deliver the programmes of study and other educational services as mentioned in its Information Brochure and website. However, circumstances may change, prompting the Department to reserve the right to change the content and delivery of courses, discontinue or combine courses and introduce or withdraw areas of specialization.

PROGRAMME OVERVIEW/ SCHEME OF THE PROGRAMME

- Undergraduate degree programmes of either 3 or 4-year duration, with multiple entries and exit points and re-entry

options within this period, with appropriate certifications such as:

- UG Certificate after completing 1 year (2 semesters) of study in the chosen fields of study, provided they complete one vocational course of 4 credits during the summer vacation of the first year or internship/ Apprenticeship in addition to 6 credits from skill-based courses earned during the first and second semesters.,
- UG Diploma after 2 years (4 semesters) of study diploma provided they complete one vocational course of 4 credits or internship/ Apprenticeship/ skill based vocational courses offered during the first year or second year summer term, in addition to 9 credits from skill-based courses earned during the first, second and third semester.
- Bachelor's Degree after a 3-year (6 semesters) programme of study,
- Bachelor's Degree (Honours) after a 4-year (8 semesters) programme of study.
- Bachelor's Degree (Honours with Research) after a 4-year (8 semesters) programme of study to the students undertaking a 12-credit Research component in the fourth year of FYUGP.

CREDIT OF COURSES

The term 'credit' refers to the weightage given to a course, usually in terms of the number of instructional hours per week assigned to it. The workload relating to a course is measured in terms of credit hours. It determines the number of hours of instruction required per week over a semester (minimum 15 weeks).

a) One hour of teaching/ Lectures or two hours of laboratory /practical work will be assigned per class/interaction.
One credit for Theory = 15 Hours of Teaching
One credit for Practicum = 30 Hours of Practical work
One credit for Internship = 02 Weeks of Practical experience

b) For credit determination, instruction is divided into three major components:
Hours (L) – Classroom Hours of one hour duration.
Tutorials (T) – Special, elaborate instructions on specific topics of one hour duration
Practical (P) – Laboratory or field exercises in which the student has to do experiments or other practical work of a two-hour duration.
Internship – For the Exit option after any academic year of a Four-year U.G. Programme for the award of U.G. Certificate, U.G. Diploma, U.G. Degree (Level 4.5, 5 or 5.5 respectively), Students can either complete two 4-week internships worth 2 credits each or one 8-week internship for all 4 credits. This practical experience connects academic learning with real-world applications, offering valuable exposure to professional environments in their fields of study

CHANGE OF MAJOR OR MINOR COURSES

- The change of Major or Minor courses may be allowed only once after the Second Semester and before the third Semester in the FYUG Programme, depending on the provisions laid by the FYUGP and the conditions laid by the Institution. **However, the student must clear the papers (Mid Sem & End Sem both) from the previous semesters of the new subject opted in the next Examination of the coming session.**

CALCULATION OF MARKS FOR THE PURPOSE OF THE RESULT

- Students' final marks and the result will be based on the marks obtained in the Semester Internal Examination and End Semester Examination organized taken together.
- Passing in a subject will depend on the collective marks obtained in the Semester internal and End Semester University Examination. However, students must pass in Theory and Practical Examinations separately.

PROMOTION CRITERIA

First degree programme with a single major (160+4=164 credits):

i. The Requisite Marks obtained by a student in a particular subject will be the criteria for promotion to the next Semester.
ii. No student will be detained in odd Semesters (I, III, V & VII).
iii. To get promotion from Semester-II to Semester-III a student will be required to pass in at least 75% of the Courses in an academic year, a student has to pass in minimum 11 papers out of the total 14 papers. It is further necessary

to procure pass marks in minimum of 50% papers of the current semester i.e. the student has to pass in 4 papers out of 7 papers in Semester-II.

iv. To get promotion from Semester-IV to Semester-V (taken together of Semester I, II, III & IV) a student has to pass in minimum of 20 papers out of the total 26 papers. It is further necessary to procure pass marks in minimum of 50% papers of the current semester i.e. the student has to pass in 3 papers out of 6 papers in Semester-IV.

v. To get promotion from Semester-VI to Semester-VII (taken all together of Semester I, II, III, IV, V & VI) a student has to pass in minimum of 27 papers out of the total 36 papers. It is further necessary to procure pass marks in minimum of 50% papers of the current semester i.e. the student has to pass in 3 papers out of 5 papers in Semester VI.

vi. However, it will be necessary to procure pass marks in each of the papers before completion of the programme.

First degree programme with dual major (192+4=196 credits):

i. Please refer to the FYUGP Regulations for the detailed provisions of Double Major and Dual Degrees.

ii. No student will be detained in odd Semesters (I, III, V & VII).

iii. To get promotion from Semester-II to Semester-III a student will be required to pass in at least 75% of the Courses in an academic year, a student has to pass in minimum 11 papers out of the total 15 papers. It is further necessary to procure pass marks in minimum of 50% papers of the current semester i.e. the student has to pass in 4 papers out of 8 papers in Semester-II.

iv. To get promotion from Semester-IV to Semester-V (taken together of Semester I, II, III & IV) a student has to pass in minimum 20 papers out of the total 27 papers. It is further necessary to procure pass marks in minimum of 50% papers of the current semester i.e. the student has to pass in 4 papers out of 7 papers in Semester-IV.

v. To get promotion from Semester-VI to Semester-VII (taken all together of Semester I, II, III, IV, V & VI) a student has to pass in minimum 28 papers out of the total 37 papers. It is further necessary to procure pass marks in minimum of 50% papers of the current semester i.e. the student has to pass in 3 papers out of 6 papers in Semester VI.

vi. However, it will be necessary to procure pass marks in each of the papers before completion of the programme.

PUBLICATION OF RESULTS

- The examination result shall be notified by the Controller of Examinations of the University in different newspapers and the same is to be posted also on the University website.
- If a student is found indulging in any malpractice/ unfair means during an examination, the examination taken by the student for the semester will be cancelled. The candidate has to reappear in all the papers of the session with the students of the next session and his one year will be detained. However, marks secured by the candidate in all previous semesters will remain unaffected.
- There shall be no Supplementary or Re-examination for any subject. Students who have failed in any subject in an even semester may appear in the subsequent even semester examination to clear the backlog. Similarly, the students who have failed in any subject in an odd semester may appear in the subsequent odd semester examination to clear the backlog.

Regulations related to any concern not mentioned above shall be guided by the Regulations of the Ranchi University for FYUGP.

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COURSE STRUCTURE FOR FYUGP **'HONOURS/ RESEARCH/ PG DIPLOMA'**

Table 1: Credit Framework for Four-Year Undergraduate Programme (FYUGP) under State Universities of Jharkhand [Total Credits = 164]

Academic Level	**Level of Courses**	**Semester**	**MJ**: Discipline Specific Courses – Core or Major (80)	**AC**: Associated core courses from discipline/ Interdisciplinary/ vocational (8)		**ELC**: Elective courses may be opted from four paths [Follow table 2] (24)	**MDC**: Multidisciplinary Courses (From a pool of Courses) (9)	**AEC**: Ability Enhancement Courses (Modern Indian Language and English) (8)	**SEC**: Skill Enhancement Courses (9)	**VAC**: Value Added Courses (6)	**IKS**: (i) Indian Knowledge System (2) & **SA**: (ii) Social awareness (2)	**RC**: Research Courses (4+8)/	**AMJ**: Advanced Courses instead of Research (4+4+4)/ **PGD:** PG Diploma Level 6 (4+4+4)	**Total Credits**	**IAP**; Internship/Apprenticeship/ Project/ Vocational course/ Dissertation (4) **In between Sem I to Sem-VI**
	1	2	3 (Major- 80)	4 (Minor-32)			5	6	7	8	9	10	11	12	13
Level 4.5	Level 100-199: **Foundation or Introductory courses**	**I**	4	4	---	---	3	2	3	2	2	---	---	**20**	4
		II	4	---	4	---	3	2	3	2	2	---	---	**20**	
		Exit Point: Undergraduate Certificate provided with Summer Internship/ Project/ Vocational course/ Dissertation (4 credits)													
Level 5	Level 200-299: **Intermediate-level courses**	**III**	4+4	---		4	3	2	3	---	---	---	---	**20**	
		IV	4+4+4	---		4	---	2	---	2	---	---	---	**20**	
		Exit Point: Undergraduate Diploma provided with Summer Internship/ Project/ Vocational course/ Dissertation (4 credits)													
Level 5.5	Level 300-399: **Higher-level courses**	**V**	4+4+4+4	---		4	---	---	---	---	---	---	---	**20**	
		VI	4+4+4+4	---		4	---	---	---	---	---	---	---	**20**	
		Exit Point: Bachelor's Degree with Summer Internship/ Project/ Vocational course/ Dissertation (4 credits)												**124**	
Level 6	Level 400-499: **Advanced courses** Hons with Research (>7.5 CGPA)/ Honours/ PG Diploma	**VII**	4+4+4	---		4	---	---	---	---	---	4	4	**20**	---
		VIII	4+4	---		4	---	---	---	---	---	8	4+4	**20**	
		Exit Point: Bachelor's Degree with Honours/ Honours with Research/ PG Diploma Level 6												**164**	

Note: Honours students not undertaking research will do 3 courses for 12 credits in lieu of a Research project..

Table 2: Options for Elective Minor Courses

Path A	Path B	Path C	Path D
ELC-A; Elective courses from Interdisciplinary Subjects 1 & 2 (24)	**ELC-B**; Elective courses from discipline (24)	**ELC-C**; Elective courses from vocational (24)	**ELC-D**; Elective courses from discipline for Double Major (48)
This pathway may be recommended for students who wish to develop core competency in multiple disciplines of study. In this case, the credits for the minor pathway shall be distributed among the constituent disciplines/subjects. If students pursuing FYUGP are awarded a UG Degree in a Major discipline, they are eligible to mention their core competencies in other disciplines of their choice if they have earned 12 credits each from pathway courses of two particular disciplines. In the first three years of FYUGP, this pathway is composed of one Major discipline with 60 credits from 15 courses, and two other disciplines, with 12 credits from 3 courses in each discipline. In this pathway, if the students choose one of the two disciplines for 12 credits in one discipline then they should choose a different discipline for the other 12 credits. If the students continue to the fourth year of FYUGP, the students need to earn an additional 4 credits in both disciplines.	This pathway may be recommended to those students who wish for an in-depth study in more than one discipline with a focus on one discipline (Major) and relatively less focus on the other (Minor). If students exit at the end of the third year of FYUGP, they are awarded a Major Degree in a particular discipline and a Minor in another discipline of their choice, if they earn a minimum of 24 credits from the courses in the Minor discipline. If the students continue to the fourth year of FYUGP, they should earn a minimum of 32 credits in the Minor discipline, to be eligible for a UG Degree (Honours) with a Major and a Minor. For this, in the fourth year, they should earn an additional minimum of 8 credits through 2 courses in the Minor discipline.	This pathway may be recommended to those students who wish for exposure to a vocational discipline in addition to the in-depth study in the Major discipline. The credit requirements for Major and Vocational Minor disciplines in this pathway are the same as those for Major with Minor pathway, except that the Minor courses are in a vocational discipline. If students exit at the end of the third year of FYUGP, they are awarded a Major Degree in a particular discipline and a Minor in vocational discipline of their choice, if they earn a minimum of 24 credits from the Vocational courses. If the students continue to the fourth year of FYUGP, they should earn a minimum of 32 credits in the vocational discipline. For this, in the fourth year, they should earn an additional minimum of 8 credits through 2 courses in the Vocational discipline.	To secure the required minimum credits in each discipline, students who wish to opt for a Double Major should include the credits earned by them from the Multi-Disciplinary Courses, Skill Enhancement Courses, and Value-Added Courses offered by the respective Major disciplines. The Double Major pathway is extended to the fourth year. Shifting to a double major from a minor in the third semester will be allowed subject to clearance of the courses of double major (not studied earlier) in succeeding sessions. In the fourth year, the student can continue to earn the required credits in either Major A or Major B to qualify for a UG Degree (Honours)/ UG Degree (Honours with Research) in A or B. If he/she opts to continue with Major B in the fourth year, he/she should earn an additional 16 credits of 300-399 level in Major B through mandatory online courses. The institution will not provide the courses in physical mode in the fourth year of this segment.

Table 3: Credit Distribution in Elective Minor Courses during the Four Years of FYUGP

Academic Level	Level of Courses	Semester	Path A **ELC**; Elective courses from Interdisciplinary Subjects 1 & 2 (24)		Path B **ELC**; Elective courses from the discipline (24)	Path C **ELC**; Elective courses from vocational (24)	Path D **ELC**; Elective courses from the discipline for Double Major (64)
	1	2	3A. Subject 1	3B. Subject 2	4	5	6
Level 4.5	Level 100-199: **Foundation or Introductory courses**	**I**	---	---	---	---	4+4
		II	---	---	---	---	4+4
		Exit Point: Bachelor's Degree with Hons. with Research					
Level 5	Level 200-299: **Intermediate-level courses**	**III**	4	---	4	4	4+4
		IV	---	4	4	4	4+4
		Exit Point: Bachelor's Degree with Hons.					
Level 5.5	Level 300-399: **Higher-level courses**	**V**	4	---	4	4	4+4
		VI	---	4	4	4	4+4
		Exit Point: P.G. Diploma Degree					
Level 6	Level 400-499: **Advanced courses** Hons with Research (>7.5 CGPA)/ Honours/ PG Diploma	**VII**	4	---	4	4	4+4
		VIII	---	4	4	4	4+4
		Exit Point: (A) Bachelor's Degree with Hons. with Research/ (B) Bachelor's Degree with Hons./ (C) P.G. Diploma Degree					

COURSES OF STUDY FOR FOUR-YEAR UNDERGRADUATE PROGRAMME 2025 onwards

Table 4: Semester-wise Course Code and Credit Points for Single Major during the First Three Years of FYUGP

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
I	AEC-1	Language and Communication Skills (MIL-1; Modern Indian language Hindi/ English)	2	7 Papers (20 credits)
	VAC-1	Value Added Course-1	2	
	IKS-1	Indian Knowledge System-I (Foundation Course)	2	
	SEC-1	Skill Enhancement Course-1	3	
	MDC-1	Multi-disciplinary Course-1	3	
	AC-1	Associated core courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-1	Major paper 1 (Disciplinary/ Interdisciplinary Major)	4	
II	AEC-2	Language and Communication Skills (MIL-1; Modern Indian language English/ Hindi)	2	7 Papers (20 credits)
	VAC-2	Value Added Course-2	2	
	SA	Social Awareness Activities	2	
	SEC-2	Skill Enhancement Course-2	3	
	MDC-2	Multi-disciplinary Course-2	3	
	AC-2	Associated core courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-2	Major paper 2 (Disciplinary/ Interdisciplinary Major)	4	
III	AEC-3	Language and Communication Skills (MIL-2; MIL including TRL)	2	6 Papers (20 credits)
	SEC-3	Skill Enhancement Course-3	3	
	MDC-3	IKS as a Multi-disciplinary Course-3	3	
	ELC-1	Elective courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-3	Major paper 3 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-4	Major paper 4 (Disciplinary/ Interdisciplinary Major)	4	
IV	AEC-4	Language and Communication Skills (MIL-2; MIL including TRL)	2	6 Papers (20 credits)
	VAC-3	Value Added Course-3	2	
	ELC-2	Elective courses from discipline/ Interdisciplinary/ vocational	4	
	MJ-5	Major paper 5 (Disciplinary/ Interdisciplinary Major having IKS)	4	
	MJ-6	Major paper 6 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-7	Major paper 7 (Disciplinary/ Interdisciplinary Major)	4	
V	ELC-3	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-8	Major paper 8 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-9	Major paper 9 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-10	Major paper 10 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-11	Major paper 11 (Disciplinary/ Interdisciplinary Major)	4	
VI	ELC-4	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-12	Major paper 12 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-13	Major paper 13 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-14	Major paper 14 (Disciplinary/ Interdisciplinary Major)	4	
	MJ-15	Major paper 15 (Disciplinary/ Interdisciplinary Major)	4	
Total Credits, excluding one Internship (IAP) of 4 credits =			**120**	**120**

Note: It is mandatory to take One Internship of 4 credits in any one of the semesters during the first three years in FYUGP or before exit at any of the exit points if a student wishes to opt for the same.

Table 5A: Semester-wise Course Code and Credit Points for Single Major during the Fourth Year of FYUGP for Bachelor's Degree (Honours with Research)

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
VII A	ELC-5	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-16	Major paper 16 (Research Methodology)	4	
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4	
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4	
	RC-1	Research proposal – Planning & Techniques (Disciplinary/Interdisciplinary Major)	4	
VIII A	ELC-6	Elective courses from discipline/ Interdisciplinary/ vocational	4	4 Papers (20 credits)
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4	
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4	
	RC-2	Research Internship/Field Work/Project/Dissertation/Thesis	8	
		Total Credits, excluding one Internship of 4 credits =	**160**	**160**

Table 5B: Semester-wise Course Code and Credit Points for Single Major during the Fourth Year of FYUGP for Bachelor's Degree (Honours)

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
VII B	ELC-5	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-16	Major paper 16 (Disciplinary/Interdisciplinary Major)	4	
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4	
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4	
	AMJ-1	Advanced Major pape-1 (Disciplinary/Interdisciplinary Major)	4	
VIII B	ELC-6	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4	
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4	
	AMJ-2 AMJ-3	Advanced Major paper-2 (Disciplinary/Interdisciplinary Major) Advanced Major paper-3 (Disciplinary/Interdisciplinary Major)	4 4	
		Total Credits, excluding one Internship of 4 credits =	**160**	**160**

Table 5C: Semester-wise Course Code and Credit Points for Single Major during the Fourth Year of FYUGP for Bachelor's Degree (with Postgraduate Diploma)

Semester	Common, Introductory, Major, Minor, Vocational & Internship Courses		Credits	
	Code	Papers	Paper	Semester
VII C	ELC-5	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-16	Major paper 16 (Disciplinary/Interdisciplinary Major)	4	
	MJ-17	Major paper 17 (Disciplinary/Interdisciplinary Major)	4	
	MJ-18	Major paper 18 (Disciplinary/Interdisciplinary Major)	4	
	JOC-1	Skill based Job Oriented paper (Disciplinary/Interdisciplinary Major)	4	
VIII C	ELC-6	Elective courses from discipline/ Interdisciplinary/ vocational	4	5 Papers (20 credits)
	MJ-19	Major paper 19 (Disciplinary/Interdisciplinary Major)	4	
	MJ-20	Major paper 20 (Disciplinary/Interdisciplinary Major)	4	
	JOC-2	Skill based Job Oriented paper (Disciplinary/Interdisciplinary Major)	4	
	JOC-3	Skill based Job Oriented paper (Disciplinary/Interdisciplinary Major)	4	
		Total Credits, excluding one Internship of 4 credits =	**160**	**160**

AIMS OF BACHELOR'S DEGREE PROGRAMME IN HOME SCIENCE

The aim of bachelor's degree programme in Home Science is intended to provide:

1. **Basic Concept:** The fundamental concepts and philosophical foundation of each course need to be discussed.
2. **Understanding Landscape:** An understanding of landscape at different levels needs to be discussed and understood for a thorough knowledge of spatial dimensions.
3. **Understanding Ecosystem Structure and Potential:** To comprehend the dynamic dimensions of human and ecosystem relationships.
4. **Human Perception and Behaviour:** Learning human perception and behaviour to acquire the geographical knowledge evolved over time, is essential to improve decision making process.
5. **Identification of Critical Problems and Issues:** Detection and identification of the critical problems and spatial issues are essential for sustainable development.
6. The aims of the Home Science are also to:
    a. Enable students with knowledge, skills, attitudes and values to do community work in all areas of Home Science
    b. Ensure global competitiveness and excellence in theory and research.
    c. Prepare the students for master's program in their respective specialisation.
    d. Train the students to take science from lab to community to improve quality of life of people.
    e. Demonstrate systematic, extensive and coherent knowledge in one of the five disciplines of Home Science Namely Food and Nutrition, Human Development and Childhood Studies, Development Communication and Extension, Resource Management and Design Application, and Fabric and Apparel Science.
    f. Ensure basic understanding of all five areas to be able to work in national development programs with multi-disciplinary acumen.
    g. Demonstrate skill in profession, community outreach, policy and research in their specialization area.
    h. Demonstrate community and laboratory-based data collection, analysis and interpretation.
    i. Enhance communication skills for research findings and critique of life processes in community education. Demonstrate subject related skills for employment opportunities.
    j. To provide the latest subject matter, both theoretical as well as practical, such a way to foster their core competency and discovery learning. A Home Science graduates as envisioned in this framework would be sufficiently competent in the field to undertake further discipline-specific studies, as well as to begin domain-related employment.
    k. To mold a responsible citizen who is aware of most basic domain-independent knowledge, including critical thinking and communication.
    l. To enable the graduate, prepare for national as well as international competitive examinations, especially UGC-CSIR NET and UPSC Civil Services Examination.

PROGRAMME LEARNING OUTCOMES

The programme learning outcomes relating to Honours/Research Degree in Home Science:

(i) Understand and appreciate the role of interdisciplinary sciences in the development and well- being of individuals, families and communities
(ii) Understand the sciences and technologies that enhance the quality of life of people
(iii) Acquire professional and entrepreneurial skills for economic empowerment of self in particular, and community in general
(iv) Develop professional skills in food, nutrition, textiles, housing, product making, communication technologies and human development
(v) Take science from the laboratory to the people and enhance quality of life.
(vi) It is also suggested that after the completion of FYUGP Hons./Research, students should be able to demonstrate the knowledge obtained in such way so that they can explore the employability options and service to the society.

Lifelong learner: The course curriculum is designed to inculcate a habit of learning continuously through use of advanced ICT technique and other available techniques/books/journals for personal academic growth as well as for increasing employability opportunity.

SEMESTER WISE COURSES IN HOME SCIENCE HONOURS **2025 onwards**

Table 6: Semester-wise Course Code and Credit Points of Major Courses in Home Science

Semester	Courses		Examination Structure			
	Code	Courses in NEP FYUGP Syllabus of Home Science Session 2025-26 & onwards	Credits	Mid Semester Theory (F.M.)	End Semester Theory (F.M.)	End Semester Practical/ Viva (F.M.)
I	MJ-1	Basics of Food Science and Nutrition	4	25	75	---
	SEC-1	Health Care, Dietetics, Maternal & Child Nutrition	3	---	75	---
II	MJ-2	Fundamentals of Human Development	4	25	75	---
	SEC-2	Surface Ornamentation	3	---	75	---
III	MJ-3	Introduction To Textiles	4	25	75	---
	MJ-4	Practical-I	4	---	---	100
	SEC-3	Elementary Computer Application Softwares	3	---	75	---
IV	MJ-5	IKS and Home Science	4	25	75	---
	MJ-6	Resource Management Concept and Context	4	25	75	---
	MJ-7	Practical-II	4	---	---	100
V	MJ-8	Communication and Extension	4	25	75	---
	MJ-9	Early Childhood Care and Education	4	25	75	---
	MJ-10	Fundamentals of Clothing Construction	4	25	75	---
	MJ-11	Practical-III	4	---	---	100
VI	MJ-12	Family Finance and Consumer Behaviour	4	25	75	---
	MJ-13	Family Meal Management	4	25	75	---
	MJ-14	Communication Process and Media	4	25	75	---
	MJ-15	Practical-IV	4	---	---	100
VII	MJ-16	Research Methodology in Home Science	4	25	75	---
	MJ-17	Public Health Nutrition	4	25	75	---
	MJ-18	Practical-V	4	---	---	100
	AMJ-1/	A. Dietetics OR B. Childhood and Adolescence OR C. Fashion Marketing and Merchandising/	4	25	75	---
	RC-1	Research Planning & Techniques	4	25	75	---
VIII	MJ-19	Community Development	4	25	75	---
	MJ-20	Practical-VI	4	---	---	100
	AMJ-2	A. Nutrition for Health and Physical Fitness OR B. Adulthood and Aging OR C. Apparel Construction	4	25	75	---
	AMJ-3/	Practical-VII (Advanced Home Science)	4	---	---	100
	RC-2	Project Dissertation/ Research Internship/ Field Work	8	50	---	150

***** It is mandatory to take Either One Internship of 4 credits or Two Internships of 2 credits each in any one of the semesters during the first three years in FYUGP or before exit at any of the exit points if a student wishes to opt for the same.

Table 7: Semester-wise Course Code and Credit Points of Minor Courses in Home Science

Courses		Examination Structure			
Code	**Minor Courses in NEP FYUGP Syllabus of Economics** Session 2025-26 & onwards	**Credits**	**Mid Semester Theory (F.M.)**	**End Semester Theory (F.M.)**	**End Semester Practical/ Viva (F.M.)**
MN-A	Introductory Home Science	4	15	60	25
MN-B	Nutrition: A Lifespan Approach	4	15	60	25
MN-C	Behaviour Change Communication	4	15	60	25
MN-D	Resource Management	4	15	60	25
MN-E	Introduction to Textile	4	15	60	25
MN-F	Current Concerns in Public Health Nutrition	4	15	60	25
MN-G	Care And Well-Being in Human Development	4	15	60	25

INSTRUCTION TO QUESTION SETTER

SEMESTER INTERNAL EXAMINATION (SIE):

There will be Only One Semester Internal Examination in Major, Minor and Research Courses, which will be organized at college/institution level. However, Only One End semester evaluation in other courses will be done either at College/ Institution or University level depending upon the nature of course in the curriculum.

A. (SIE 10+5=15 marks):

There will be two group of questions. **Question No.1 will be very short answer type in Group A** consisting of five questions of 1 mark each. **Group B will contain descriptive type** two questions of five marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 10 Marks, (b) Class Attendance Score (CAS) of 5 marks.

B. (SIE 20+5=25 marks):

There will be two group of questions. **Group A is compulsory** which will contain two questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 will be short answer type** of 5 marks. **Group B will contain descriptive type** two questions of ten marks each, out of which any one to answer.

The Semester Internal Examination shall have two components. (a) One Semester Internal Assessment Test (SIA) of 20 Marks, (b) Class Attendance Score (CAS) of 5 marks.

Conversion of Attendance into score may be as follows:

Attendance Upto 45%, 1mark; 45<Attd.<55, 2 marks; 55<Attd.<65, 3 marks; 65<Attd.<75, 4 marks; 75<Attd, 5 marks.

END SEMESTER UNIVERSITY EXAMINATION (ESE):

A. (ESE 50 marks):

There will be two group of questions. **Group A is compulsory** which will contain one question. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. Group B will contain descriptive type five questions of fifteen marks each, out of which any three are to answer.

B. (ESE 60 marks):

There will be two group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No.2 & 3 will be short answer type** of 5 marks. Group B will contain descriptive type five questions of fifteen marks each, out of which any three are to answer.

C. (ESE 75 marks):

There will be two group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of five questions of 1 mark each. **Question No. 2 & 3 will be short answer type** of 5 marks. Group B will contain descriptive type six questions of fifteen marks each, out of which any four are to answer.

D. (ESE 100 marks):

There will be two group of questions. **Group A is compulsory** which will contain three questions. **Question No.1 will be very short answer type** consisting of ten questions of 1 mark each. **Question No. 2 & 3 will be short answer type** of 5 marks. Group B will contain descriptive type six questions of twenty marks each, out of which any four are to answer.

FORMAT OF QUESTION PAPER FOR MID/ END SEMESTER EXAMINATIONS

Question format for **15 Marks**:

Subject/ Code

F.M. =15 **Time** = 1 Hr. Exam Year

General Instructions:

i. **Group A** carries very short answer-type compulsory questions.
ii. **Answer 1 out of 2** subjective/ descriptive questions given in **Group B**.
iii. Answer in your own words as far as practicable.
iv. Answer all subparts of a question in one place.
v. Numbers in the right indicate full marks for the question.

Group A

1. [5x1=5]
   i. .....
   ii. .....
   iii. .....
   iv. .....
   v. .....

Group B

2. ..... [10]
3. ..... [10]

Note: There may be subdivisions in each question asked in Theory Examination.

Question format for **20 Marks**:

Subject/ Code

F.M. =20 **Time** = 1 Hr. Exam Year

General Instructions:

i. **Group A** carries very short answer-type compulsory questions.
ii. **Answer 1 out of 2** subjective/ descriptive questions given in **Group B**.
iii. Answer in your own words as far as practicable.
iv. Answer all subparts of a question in one place.
v. Numbers in the right indicate full marks for the question.

Group A

1. [5x1=5]
   i. .....
   ii. .....
   iii. .....
   iv. .....
   v. .....
2. ..... [5]

Group B

3. ..... [10]
4. ..... [10]

Note: There may be subdivisions in each question asked in the Theory Examination.

Question format for **50 Marks**:

Subject/ Code

F.M. =50 **Time** = 1.5 Hrs. Exam Year

General Instructions:

i. **Group A** carries very short answer-type compulsory questions.
ii. **Answer 3 out of 5** subjective/ descriptive questions given in **Group B**.
iii. Answer in your own words as far as practicable.
iv. Answer all subparts of a question in one place.
v. Numbers in the right indicate full marks for the question.

Group A

1. [5x1=5]
   i. .....
   ii. .....
   iii. .....
   iv. .....
   v. .....

Group B

2. ..... [15]
3. ..... [15]
4. ..... [15]
5. ..... [15]
6. ..... [15]

Note: There may be subdivisions in each question asked in the Theory Examination.

Question format for **60 Marks**:

Subject/ Code

F.M. =60 **Time** = 3 Hrs. Exam Year

General Instructions:

vi. **Group A** carries very short answer-type compulsory questions.
vii. **Answer 3 out of 5** subjective/ descriptive questions given in **Group B**.
viii. Answer in your own words as far as practicable.
ix. Answer all subparts of a question in one place.
x. Numbers in the right indicate full marks for the question.

Group A

7. [5x1=5]
   vi. .....
   vii. .....
   viii. .....
   ix. .....
   x. .....
8. ..... [5]
9. ..... [5]

Group B

10. ..... [15]
11. ..... [15]
12. ..... [15]
13. ..... [15]
14. ..... [15]

Note: There may be subdivisions in each question asked in the Theory Examination.

Question format for **75 Marks**:

Subject/ Code

F.M. =75 **Time** = 3 Hrs. Exam Year

General Instructions:

i. **Group A** carries very short answer-type compulsory questions.
ii. **Answer 4 out of 6** subjective/ descriptive questions given in **Group B**.
iii. Answer in your own words as far as practicable.
iv. Answer all subparts of a question in one place.
v. Numbers in the right indicate full marks for the question.

Group A

1. [5x1=5]
   i. .....
   ii. .....
   iii. .....
   iv. .....
   v. .....
2. ..... [5]
3. ..... [5]

Group B

4. ..... [15]
5. ..... [15]
6. ..... [15]
7. ..... [15]
8. ..... [15]
9. ..... [15]

Note: There may be subdivisions in each question asked in the Theory Examination.

Question format for **100 Marks**:

Subject/ Code

F.M. =100 **Time** = 3 Hrs. Exam Year

General Instructions:

i. **Group A** carries very short answer-type compulsory questions.
ii. **Answer 4 out of 6** subjective/ descriptive questions given in **Group B**.
iii. Answer in your own words as far as practicable.
iv. Answer all subparts of a question in one place.
v. Numbers in the right indicate full marks for the question.

Group A

1. [10x1=10]
   i. ..... vi. .....
   ii. ..... vii. .....
   iii. ..... viii. .....
   iv. ..... ix. .....
   v. ..... x. .....
2. ..... [5]
3. ..... [5]

Group B

4. ..... [20]
5. ..... [20]
6. ..... [20]
7. ..... [20]
8. ..... [20]
9. ..... [20]

Note: There may be subdivisions in each question asked in the Theory Examination.

SEMESTER I

I. MAJOR COURSE –MJ 1:
BASICS OF FOOD SCIENCE AND NUTRITION

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

The course "Basics of Food Science and Nutrition" aims at developing the basic understanding of food and nutrition; it's the effect on human health and newer advances in food technology. This course encompasses the physiological, biochemical and social aspects of food and discusses the relationship between metabolites and human health. Moreover, the Course is focused on the advances in the most emerging area of Applied Science of Nutraceuticals (where food is the medicine) and provides a detailed insight into understanding the composition, molecular interaction and bio mechanisms of food metabolites. The knowledge and skills to utilize food and nutrients are as the powerful tools for physical, mental and social well-being.

Learning Objectives:

1. Study the different methods of cooking foods
2. Obtain knowledge of different food groups, their composition and nutrients present in the foods.
3. Understand the vital link between foods, nutrition and health
4. Gain knowledge on functions, requirements and effects of deficiency of nutrients

Learning Outcome:

A successful completion of this course will enable students to

1. Summarize and critically discuss and understand both fundamental and applied aspects of Food Science and nutrition and Food Production
2. Able to explain functions of specific nutrients in maintaining health
3. Identifying nutrient specific force and apply the principles from the various factors of foods and related disciplines to solve practical as well as Real world problems
4. Use current information Technologies to locate and apply evidence-based guidelines and protocol and get imported with critical thinking to take leadership roles in the field of health, diet special nutritional needs and nutritional counselling.

Course Content

Unit-I. Introduction of Food Groups, Food Pyramid and Cooking Methods (12 Lectures)

Definition and Terms used in Food Science and Nutrition. Health, Food, Nutrition, Nutrients: Macronutrients (Carbohydrates, Proteins and lipids) and Micronutrients (Vitamins and Minerals), and Malnutrition. Various classifications of Foods and Food Groups.

Definition, Classification and Functions of Foods, Basic Food Groups and Need for Grouping Foods and Application of Food Groups in Planning Adequate/Balanced Diets Culinary terms and Methods of Cooking

An Overview of culinary terms

1. Different Modes of heat transfer like Radiation, Conduction and Convection
2. Moist heat methods like Boiling, Simmering, Poaching, Steaming, Pressure cooking
3. Dry heat methods: Air as medium of cooking: Grilling, broiling, roasting, Baking,
4. Fat as medium of cooking: Sautéing, Shallow fat frying, Deep fat frying
5. Combined (Moist and dry) Methods: Braising, Stewing
6. Other cooking methods: -Microwave cooking and Solar cooking.
7. Advantages and Disadvantages of Cooking methods

Unit-II. Nutritional Significance of Different Food Groups (12 Lectures)

Basic Concepts, classification, Composition, nutritive value and Role in Cookery

Cereals and Cereal Products-

1. Types of cereals: wheat, rice, millets,
2. Cereal Products-Flaked rice, puffed rice, wheat flour.

Principles and properties of Cereals and its utility: Germination (Amylase Rich Foods- ARF), Fermentation, Parboiling, Gelatinization, Dextrinization, Gluten formation)

1. Pulses and Legumes,
2. Fruits and Vegetables,
3. Salt, Sugar and Jaggery,
4. Nuts, oils and Oil seeds
5. Milk and Milk Products including Fortified milk & its importance

Eggs-Basic structure of an egg and biological value, Quality evaluation and grading of eggs Meat, poultry and fish

Spices & Condiments – their importance and functional properties

Unit III- Macronutrients (12 Lectures)

Definition, Classification, Dietary Sources, Functions, Recommended Dietary Allowances, Clinical signs and symptoms of Deficiency diseases and Excess of - Energy, Carbohydrates, Proteins, Lipids, Water

Unit IV- Minerals (12 Lectures)

Definition, Classification, Distribution of minerals in the body.

Functions, sources, requirements and effects of deficiencies of Minerals: Calcium, Phosphorus, Iron, Iodine, Zinc, Fluorine, Copper, Magnesium, Sodium, Potassium, Selenium.

Unit V- Vitamins (12 Lectures)

Classifications, functions, sources, Clinical signs and symptoms of deficiency,

Requirements of Fat Soluble Vitamins - A, D, E and K

Water Soluble Vitamins - Vitamins-B Complex Vitamins - Thiamine, Riboflavin, Niacin, Pyridoxine, Folic acid, Cyanocobalamin and Vitamin C

Recommended Readings:

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

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II. SKILL ENHANCEMENT COURSE- SEC 1:
HEALTH CARE, DIETETICS, MATERNAL & CHILD NUTRITION

Marks: 75 (ESE: 3Hrs) = 75	Pass Marks: Th (ESE) = 30

(Credits: Theory-03) **45 Hours**

Course Description
The course deals about the details about relationship health and dietetics, nutritional need during pregnancy, lactation, infancy and Nutritional policies related to mother and child.

Course Objectives:
To make students understand the concept and importance of health care the importance of maternal and child nutrition for overall development importance of diet in maintaining good health of mother and child.

Course Outcome
Students will have understanding of maintaining good health knowledge and practice for maintaining good health and maternal and child nutrition

Course Contents

Unit-I Health Care & Dietetics **(09 Lectures)**
Concept of Health and Dimensions of Health, Health and Hygiene, Introduction, Causes, Symptoms and Prevention for cardiovascular disease, Diabetes, Fever and Under Nutrition, Diet Plan for cardiovascular Patient, Diabetes, Fever, Anemia.

Unit-II: Nutritional needs during pregnancy **(09 Lectures)**
Nutritional needs during pregnancy, common disorders of pregnancy (Anaemia, HIV Infection) Maternal health and Nutritional Status

Unit-III: Nursing mothers and infants **(09 Lectures)**
Nutritional need of nursing mothers and infants

Unit-IV: Infant and child mortality **(09 Lectures)**
Breast feeding, weaning and complementary feeding. Child health and morbidity, neonatal, infant and child mortality

Unit-V Nutrition policies **(09 Lectures)**
Overview of maternal and child nutrition policies

Suggested Readings:

1. Wadhwa A and Sharma S, Nutrition in the Community,
2. Bansji M 5, Textbook of Human Nutrition
3. Wadhwa A and Sharma S (2003), Nutrition in the Community- A Textbook. Elite Publishing House Pvt. Ltd. New Delhi
4. National Guidelines on Infant and Young Child Feeding (2006). Ministry of Women and Child Development, Government of India.
5. Joshi Shubhangi A., Nutrition and Dietitics, McGraw Publication, (2021) ISBN-10. 9390727820 · ISBN-13. 978-9390727827
6. Khanna Kumud, et al. , Textbook of Nutrition and Dietetics, ISBN : 9788188901531
7. कुमारी आशा , आहार एवं पोषण विज्ञानं, अग्रवाल पब्लिकेशन , २०१२, ISBN - ९७८ ९३८११२४९७०
8. एम् स्वामीनाथन, आहार एवं पोषण विज्ञानं , एन आर ब्रदर्स, इंदौर ISBN - ८१८५६०५२५४

SEMESTER II

I. MAJOR COURSE- MJ 2:
FUNDAMENTALS OF HUMAN DEVELOPMENT

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	**Pass Marks: Th (SIE + ESE) = 40**

(Credits: Theory-04) **60 Hours**

Course Description
The course introduces students to the concept of human development. It then moves on to discuss the various schools of thought that gave rise to different theoretical frameworks to understand human development. It explains basic developmental principles and factors like heredity and environment which influence growth and development. It deals with development during different stages of life span, starting from conception to old age. It further discusses the principles of working with human beings and methods of studying human development.

Learning Objectives

1. Develop an understanding about the need and importance of studying human growth and development across life span
2. Learn about the biological and environmental factors that affect development
3. Learn about the characteristics, needs and developmental tasks of different stages in the human life cycle
4. Understand the different theoretical frameworks fundamental to HDFS
5. Learn about the classic human development theories
6. Develop professional attitude for working with human beings across life span

Learning Outcomes

1. Explain the need and importance of studying human growth and development across life span.
2. Identify the biological and environmental factors affecting human development.
3. Describe the characteristics, needs and developmental tasks of different stages in the human life cycle
4. Explain the broad theoretical perspectives and frameworks of HDFS

Course Content

Unit I Theoretical Frameworks and Theories **(12 Lectures)**

Theoretical Frameworks
Biological-maturational
Environmental learning
Culture-contextual
Overview of theories of human development

1. Freud's theory of psychosexual development
2. Erikson's theory of psychosocial development
3. Piaget's theory of cognitive development
4. Learning theories- Skinner

Indian Thinkers (selected) on Educational Theories

1. Mahatma Gandhi
2. Rabindranath Tagore
3. Gijubhai Badeka and Tarabai Modak

Unit II: Introduction to Human Development **(10 Lectures)**

Definition, History
Scope and importance of Human Development in contemporary society
Domains, Stages and Contexts of development,
Principles of Growth and Development,

Unit III: Prenatal Development and Birth Process **(10 Lectures)**

Reproductive health
Conception, Pregnancy, Prenatal Development – stages, factors affecting, diagnostics techniques, Birth Process, Stages of birth, Types of delivery (natural, c-section, breech, home vs. assisted delivery)
Capacities and Immediate care of newborn, adjustments made by newborn, types of feeding - natural and artificial, weaning, infant and mother mortality and morbidity, immunization schedule.

Unit IV: Stages in the Human Life Cycle: An Overview (14 Lectures)

Characteristics, needs and developmental tasks of individuals in relation to physical, cognitive, socio- emotional domains of development in the following life stages:

1. Neonate (birth-1 month)
2. Infancy (1 month-2 years)
3. Early childhood (2-6 years)
4. Middle childhood (6-11 years)
5. Adolescence (12-18 years)
6. Emerging and Young adulthood (18-35 years), diversity of roles and relationships
7. Middle age / mature adulthood (35-60 years)
8. Late adulthood / Old age (60 years and above)- Parenting and Grand Parenting

UNIT V: Professional Skills for Working with Human Beings (14 Lectures)

Research Methods:

Case study, interview, naturalistic observation, laboratory observation,
experimental methods, cross sectional and longitudinal and sequential studies.

Ethics of research with human subjects – written consent, privacy,
no harm, no plagiarism, debriefing

Self-awareness and contextual sensitivity

1. Building professional attitudes
2. Understanding development in different contexts and circumstances
3. Developing contextual sensitivity and preparation for field experiences
4. Personal and Professional issues involved in a career as HDFS professional (Identify entry level jobs, career path and job tasks/requirements)

Recommended Readings:

1. Berk, L.E. (2005). Child development (5th ed.). New Delhi: Prentice Hall.
2. Bhangaokar, R., & Kapadia, S. (in press). Human Development Research in India: A historical overview. In G. Misra (Ed.), Hundred years of Psychology in India. New Delhi: Springer.
3. Feldman, R., & Babu, N. (2009). Discovering the life span. New Delhi: Pearson
4. Kakar, S. (1998). The inner world. Psychoanalytic study of childhood and society in India.
5. Delhi: Oxford University Press.
6. Kapadia, S. (2011). Psychology and human development in India. Country paper. *International Society for the Study of Behavioural Development Bulletin Number 2, Serial No. 60, pp.37-42.*
7. Keenan, T., Evans, S., & Crowley, K. (2016). *An introduction to child development*. Sage.
8. Lightfoot, C., Cole, M., & Cole, S. (2012). *The development of children*
9. (7th ed.). New York: Worth Publishers.
10. Santrock, J. (2017). *A topical approach to life span development* (9th ed.). New NY.: McGraw-Hill Higher Education.
11. Singh, A. (2015). Foundations of Human Development: A life span approach. ND: Orient Black Swan.
12. Walsh, B.A., Deflorio, L., Burnham, M.M., & Weiser, D.A. (2017). *Introduction to Human Development and Family Studies*. NY: Routledge

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II. SKILL ENHANCEMENT COURSE- SEC 2: SURFACE ORNAMENTATION

Marks: 75 (ESE: 3Hrs) = 75	Pass Marks: Th (ESE) = 30

(Credits: Theory-03) **45 Hours**

Course Outline

Surface ornamentation lends the much-needed embellishment into the garments making a drab and dull garment into something interesting. India has a rich tradition of surface ornamentation works that are applied on textiles. This course deals with different methods and materials used for surface ornamentation. Further it induces exploration for different combinations to produce creative surface on textiles. This course will enhance students' creativity by training them to use various materials and stitches. It offers ample opportunity to students to create, experiment and innovate with materials.

Learning Objectives:

1. Impart knowledge to the students about different techniques of surface ornamentation
2. Enable the students to make diversified products by using these techniques.
3. Introduce students to varied embroideries of India, painting and printing on textiles.
4. Develop skills to express their creativity through various methods of surface ornamentation.
5. Understand, develop and communicate ideas and information.

Learning Outcomes:

1. A successful completion of this course will enable students to
2. Identify and use embroidery tools following safety precautions.
3. Meticulous use stitches and trimmings. Translate design ideas onto fabric.
4. Use the Indian Embroidery, painting and printing for developing products
5. Access, analyse, evaluate and use information from a variety of sources, work collaboratively with others to achieve individual and collective goals. Confidence in developing their own designs.

Course Content

Unit I Introduction **(09 Lectures)**

Value addition to Textiles

a. Embroidery, Trimmings and decorations, Painting and Printing, Applique, Patch & Quilting.

Essentials of Surface ornamentation-

a. Materials, tools, design enlargement and reduction, design placement and transfer Care of Surface embellished articles.

Unit II Embroidery **(09 Lectures)**

Understanding embroidery techniques and preparation of samples:

a. Hand Embroidery b. Machine embroidery

Raised embroidery with

a. Net b. Sheer fabric.

Product development

a. Home decor Items with Machine Embroidery (minimum two) b. Accessories with Hand Embroidery (minimum two)

Unit III Ornamentation with colours **(09 Lectures)**

Garment restyling with Fabric Painting

Printing on Table Cloth/Stole

Creating textures with paint, block and stencil printing on fabric

Unit IV Decorative trimmings **(09 Lectures)**

Ari work with bead, sequin, mirror.

Zardosi border

Trims and other decorative items: shells, beads, stones, buttons, cords

Other techniques: Layering. Patchwork, cording, weaving, draw thread

Unit V Ornamentation with fabric discards **(09 Lectures)**

a. Patch worked Mask b. Quilted Pouch /Bag c. Smocked Yoke/ Sleeve d. Any novelty item

Recommended Readings

1. Abling, B., (2006), Marker rendering for fashion, accessories and home fashions, Fairchild publications, New York.
2. Abling, B., (2003), The Fairchild Encyclopedia of fashion accessories, Fairchild publications, New York.
3. Celia S., (2004), Know your fashion accessories, Fairchild publications, New York.
4. Hideaki, C., (1992), Colour Harmony-a guide to creative colour combinations, Rockport publishers, London.
5. McCall's (1982). McCall's Big Book of Needlecrafts. Chilton Book Company. Randnon, Pennsylvania. USA.
6. Readers digest complete Guide to Needle Work (1979), The Readers Digest Association, New York, and Montreal.
7. Shenai, V.A. (1981), History of Textile Design. Sevak Publication, Mumbai.
8. Skull J., (1988), Key terms in art craft and design, Elbrook press, Australia.

SEMESTER III

I. MAJOR COURSE- MJ 3:
INTRODUCTION TO TEXTILES

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

An introduction to Textiles course covers the fundamental of the textiles along with the physical analysis of the fiber, yarn and fabric of different textiles. The course is designed to help the students understand the basics of textiles, the processes and technology used for manufacturing it. It explains about the properties and end uses of fiber, yarn, fabric and its co-relation. This knowledge will be base for "Textile designing", "Garment technology", "Fashion designing", "Interior designing" courses. The course will be useful to those entering in textile related manufacturing, design and product development, selection, sourcing, quality control and research.

Learning Objectives

1. Get acquainted with textiles technical terms, the properties, identification, production and uses of various textile fibers, fabrics.
2. Develop the skills for identification of fibers, yarn and fabrics
3. Understand different types of yarns, weaves, selection of textiles and finishes, of laundry and stain removal.
4. Learn the methods of dyeing, printing, and finishing of fabrics.

Learning Outcome

1. Develop an understanding of concepts and basics of textiles.
2. Develop critical understanding of the techniques of fibre, yarn and fabric manufacture.
3. Identify the fibers, yarn and fabrics for its appropriate use.
4. Recommend the dyes, printing and finishing of textiles for specific use

Course Content

Unit-I. Introduction to Textiles **(2 Lectures)**

Definition of textile fibers and terminology Classification of textile fibers
Basic unit and polymer bonds in textile fiber
Physical and Chemical properties of fibers

Unit-II. Fibers **(12 Lectures)**

Natural fibers (Morphology and polymer system, production, properties and end uses)
- Cellulosic (Cotton, Jute)
- Protein (Silk, Wool)

Man-made fibers (Manufacturing process, chemical spinning, properties and end uses)
- Viscose Rayon
- Acetate Rayon
- Nylon
- Polyester
- Acrylic
- Elastomeric

Unit-III. Yarn and Fabric **(12 Lectures)**

Yarns
- Classification of yarns: simple, ply and cord
- Types of Yarn: Textured and novelty
- Twist in yarn: "s" and "z", number of twist
- Properties of yarn: strength, extension, fineness, length, diameter, composition.

Woven fabrics
- Looms and its part
- Classification Basic weaves Plain, Twill, Satin·
- Novelty weaves – Pile, Leno-Gauze, Honeycomb
- End uses of fabrics with different weaves

Knitted fabrics
- Types and terminology used
- Hand knitting

Machine knitting
Nonwoven fabrics

Unit-IV. Coloration and Finishing of Textiles (10 Lectures)

Dyes
- Terms related to dyes
- Classification of dyes
- Components of dyeing and its relation to dye material (auxiliaries, temperature and dye bath)
- Direct, Acid, Basic and Reactive dyes

Printing
- Styles of printing
- Modern methods of printing
- Pre-preparation for printing (printing paste, printing table)

Finishing
- Basic finishes - Singeing, Scouring, Bleaching, Sizing, Weighting, Degumming, Mercerizing, Sanforizing and Calendaring
- Special finishes

Unit-V. Laundry, Storage and Care of Textiles (8 Lectures)
- Introduction, Types, Uses
- Water, Soaps, Detergents
- Methods and care during laundering of different textiles

Unit VI- Traditional Textiles of India (16 Lectures)

Textile art of India, History and Classification of Traditional Indian Textiles- Painted, Printed, Resist Dyed, woven and embroidered.

Woven textiles of Northern India- (Origin, Material, Techniques)
- Rajasthan- Kota Doria
- Gujrat- Sujani, Tangaliya
- Madhya Pradesh- Chanderi, Maheshwari
- Uttar Pradesh- Brocade
- West Bengal- Dacca Muslin, Baluchari, Tangail
- Shaawl from Kshmir, Assam and Nagaland

Woven textiles of southern India- (Origin, Material, Techniques)
- Maharashtra- Paithani, Himroo
- Andhra Pradesh and Telanagana- Dharmavaram, Vrnkatagiri, Gadwal, Narayanpeth
- Karnataka- Irkal, Khann
- Tamilnadu- Kanjivaram

Recommended Reading:

1. Booth, J.E. (1996). *Principles of Textile Testing.* New Delhi: CBS Publishers & Distributors Pvt. Ltd.
2. Corbman, P.B. (1983). *Textiles: Fibre to Fabric*. McGraw-Hill Publishers.
3. Dantyagi, S. (1996). *Fundamentals of Textiles and their Care*. India: Orient Black swan Private Limited.
4. D'Souza, N. (2014). *Fabric Care*. New Delhi: New Age International Publishers.
5. Hollen, R. N., Saddler, J., & Langford, A. (1979).*Textiles*. Macmillan Publishers.
6. Madhulika, P. (2013). *Weaving.* New Delhi: Random Publishing.
7. Mahapatra, N.N. (2015). *Textile Technology.* New Delhi: A.P.H. Publishing Corporation.
8. Rastogi, D., & Chopra, S. (2017). *Textile Science*. India: Orient Blackswan Private Limited.
9. Sekhri, S. (2011). *Textbook of Fabric Science: Fundamentals to Finishing*. India: PHI Learning Pvt. Ltd.
10. Smith, J.L. (2015). *Textile Processing: Printing Dyeing Finishing.* Chandigarh: Abhishek Publication.
11. Tyagi, A. (2016). *Handbook of Fashion and Textile Design*. New Delhi: Sonali publication.

II. MAJOR COURSE- MJ 4:
PRACTICALS-I

Marks: Pr (ESE: 6Hrs) =100	Pass Marks: Pr (ESE) = 40

(Credits: Practicals-04) **120 Hours**

Instruction to Question Setter for
End Semester Examination (ESE):
There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:
Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

Practicals:

Part A **40 hrs= 20 classes**

1. Market survey of locally available various food items – Raw and Processed; for quality, cost, certification, nutrition fact.
2. Classify foods on the basis of nutrient (Carbohydrate, Protein, Fat, Iron, Calcium, Vitamin D, Vitamin A, Vitamin B Complex) present, Determination of Edible Portion of Foods, preparing market order and table setting.
3. Weight and measure controlling techniques, Standard weights and measures, household measures for raw and cooked foods.
4. Food Preparation, understanding the principles involved, nutritional quality and portion/ size of 2-3 commonly consumed recipes in each food group
    a. Cereals- rice pulao, Roti/chapati, paratha, poori, pastas etc.
    b. Pulses -Whole, de-husked, Dal, sambhar, Chole, Rajmah etc.
    c. Vegetables- Dry Preparations, Curries, Mixed
    d. Milk and milk products- Kheer, Custard,
    e. Meat, fish and poultry preparations
    f. Egg Preparations-Boiled, poached, fried, scrambled, omelets, egg pudding etc.

Part B **40 hrs= 20 classes**

1. Preparation of an album on developmental milestones of children
2. Visit to maternity ward, ante-natal clinics, and old age home
3. Plotting growth monitoring chart and interpretation
4. Observation of motor activities of a toddler.
5. Carry out case studies to know more about the different life stages, e.g., school going children, adolescents, middle adults.
6. Observations of infant child rearing practices in families from different social classes. – IKS
7. Interviews of adolescent girls and boys to understand their life style and behaviour based on gender and socio-economic status

Part C **40 hrs= 20 classes**

1. Fiber identification: Identification of natural and manmade fibers by following three methods i.e., microscopic test, burning test and solubility test
2. Study of Yarn. Identification of various types yarn, Detail study of the ply of yarn, count of yarn using lea method
3. Characteristics of Fabric (following standards) Fabric count using pick glass, crimp using scale, shrinkage, thickness, weight (GSM) of the fabric
4. Dyeing: Dyeing of yarn/fabric with different classes of dyes
    a. Dyeing of cotton yarn/ fabric with direct dyes
    b. Dyeing of silk/ wool / nylon yarn / fabrics with basic and acid dyes
    c. Dyeing of polyester yarn and fabric with disperse dyes.
5. Printing of fabrics using
    a. Direct style – block, stencil and screen b. Resist style – Tie &Dye, Batik
5. Care of Textiles
    a. Stain removal, b. Mending of textiles c. Starching using different types of starches
    d. Washing of Different garments made from different fibers.

Recommended Readings

1. Usha Chandrasekhar (2002) Food Science and Application in fodian Cookery Phoenix Publishing House P. Lid, New Delhi
2. Raina U. Kashyap S. Narula V. Thomas S Suvira, VirS. Chopra S (2010) Basic Food Preparation: A Complete Manual, 4ª Edition, Orient Black Swan Lid Mumbar
3. Srilakshmi B (2017) Nutrition Science, New Age International (P) Ltd, New Delhi
4. Keenan, T. Evans, S. & Crowicy, K. (2016). An introduction to child development Sage
5. Lightfoot, C. Cole, M. & Cole, S. (2012) The development of children (ed NewYork Worth Publishers
6. Booth, J.E. (1996), Principles of Textile Testing. New Delhi CBS Publishers & Distributors Pvt.Ltd.
7. Dantyagi, S. (1996). Fundamentals of Textiles and their Care. India: Orient Black swan Private Limited.
8. Hollen, R. N., Saddler, J., & Langford, A. (1979). Textiles. Macmillan Publishers
9. Rastogi, D., & Chopra, S. (2017). Textile Science. India: Orient Blackswan Private Limited.
10. Smith, J.L.. (2015). Textile Processing: Printing Dyeing Finishing. Chandigarh: Abhishek Publication

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III. SKILL ENHANCEMENT COURSE- SEC 3:
ELEMENTARY COMPUTER APPLICATION SOFTWARES

Marks: 75 (ESE: 3Hrs) = 75	**Pass Marks: Th (ESE) = 30**

A Common Syllabus for FYUGP (Credits: Theory-03) **45 Hours**

Instruction to Question Setter
*There will be **objective type test** consisting of **Seventy-five questions of 1 mark each**. Students are required to mark their answer on **OMR Sheet** provided by the University.*

Course Objectives:

The objective of the course is to generate qualified manpower in the area of Information Technology (IT) and Graphic designing which will enable such person to work seamlessly at any Offices.

1. Basic Concept of Computer: What is Computer, Applications of Computer, Types of computer, Components of Computer System, Central Processing Unit (CPU) **(3 Hours)**

2. Concepts of Hardware: Input Devices, Output Devices, Computer Memory, Types of Memory, processing Concept of Computer **(4 Hours)**

3. Operating system: Operating System, Functions of Operating System (Basic), Introduction to Windows 11, Working on Windows 11 environment, Installation of Application Software, My Computer, Control Panel, searching techniques in windows environment, Basic of setting **(6 Hours)**

4. Concept of Software: What is Software, Types of Software, Computer Software- Relationship between Hardware and Software, System Software, Application Software, some high level languages **(4 Hours)**

5. Internet & its uses: Basic of Computer networks; LAN, WAN, MAN, Concept of Internet, Applications of Internet; connecting to internet, what is ISP, World Wide Web, Web Browsing software's, Search Engines, URL, Domain name, IP Address, using e-governance website, Basics of electronic mail, getting an email account, Sending and receiving emails. **(6 Hours)**

6. Microsoft Word: Word processing concepts, Creation of Documents, Formatting of Documents, Formatting of Text, Different tabs of word 2016 environment, Formatting Page, Navigation of Page, Table handling, Header and footer, Page Numbering, Page Setup, Find and Replace, Printing the documents **(7 Hours)**

7. Microsoft Excel (Spreadsheet): Spreadsheet Concepts, Creating, Saving and Editing a Workbook, Inserting, Deleting Work Sheets, Formatting worksheet, Excel Formula, Concept of charts and Applications, Pivot table, goal seek, Data filter, data sorting and scenario manager, printing the spreadsheet **(6 Hours)**

8. Microsoft Power Point (Presentation Package): Concept and Uses of presentation package, Creating, Opening and Saving Presentations, working in different views in Power point, Animation, slide show, Master Slides, Creating photo album, Rehearse timing and record narration **(5 Hours)**

9. Digital Education: Introduction & Advantages of digital Education, Concept of e-learning, Technologies used in e learning **(4 Hours)**

Reference Books

1. Nishit Mathur, *Fundamentals of Computer*, APH publishing corporation (2010)
2. Neeraj Singh, *Computer Fundamentals (Basic Computer),* T Balaji, (2021)
3. Joan Preppernau, *Microsoft Power Point 2016 step by step*, Microsoft press (2015)
4. Douglas E Corner, *The Internet Book* 4th Edition, prentice –Hall (2009)
5. Wallace Wang, *Microsoft Office 2019*, Wiley (January 2018)
6. Noble Powell, *Windows 11 User Guide For Beginners and Seniors*, ASIN, (October 2021)

SEMESTER IV

I. MAJOR COURSE- MJ 5:
IKS AND HOME SCIENCE

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

This course deals with the application and integration of Indian Knowledge System to the different discipline of home science.

Learning Objective

The syllabus objectives of integrating Indian Knowledge Systems (IKS) into Home Science aim to leverage traditional knowledge for current and future challenges, promote a holistic understanding of Indian culture and its contributions, and equip students with practical skills rooted in indigenous practices.

Learning Outcome

1. Students will Develop understanding of Indian Knowledge System
2. Cultivate a holistic understanding of knowledge and its application
3. Inculcate the knowledge of traditional practices in Home Science
4. Fostering both intellectual curiosity and practical skill
5. Relevance in modern life, family management and resource utilisation

Course Content

Unit I – Indian Knowledge System and Sustainable Development (10 Lectures)

- Education and Awareness among younger generation about IKS, its importance, and its relevance –a brief idea of Indian rich and diverse cultural heritage, Indian traditional art, craft, cultural practices and wisdom, Documentation and preservation.
- application of IKS in attaining SDGs. With emphasis on eradicating poverty (SDG 1), Food Security and Sustainable Agriculture (SDG 2), Education (SDG 4), Reduced Inequalities (SDG 10), Climate Action (SDG 13), Peace, Justice, and Strong Institutions (SDG 16)

Unit II- IKS and Foods and Nutrition (12 Lectures)

- Indian food History, Food Culture and food anthropology
- **Food Cultivation and Production**- Traditional Farming Practices, Indigenous Varieties, Timing and Techniques
- **Food Preservation and Preparation**-Traditional Methods, Ingredient Combinations, Fermented Foods**-** pickles, yogurt, and other fermented products for gut health and nutrient bioavailability
- **Understanding Nutrition and Health**: traditional Dietary Guidelines and recommendations based on local food availability, seasonal variations, and individual needs, promoting balanced nutrition and health.
- **Ayurvedic Principles-** importance of specific foods and herbs for maintaining health and treating various ailments. Food as medicine and healer
- **Nutritional Value of Indigenous Foods** such as wild fruits, vegetables, and grains, which are often rich in vitamins, minerals, and antioxidants.
- **Traditional Recipes and Culinary Traditions and Practices for** diverse Flavors and nutritional benefits.
- Role of IKS in understanding and utilizing food and nutrition in a holistic and sustainable manner, contribution to the well-being of communities and the preservation of cultural heritage.
- **Indigenous Indian Health Traditions**

Unit III- Traditional and Sustainable Home Management Practices of India (08 Lectures)

Traditional Indian housing system, architecture, layout, shared spaces, ancient building material- wood, mud, stone, lime, Sustainable living- light, energy and water management, waste management, ancient water purification system, Types of Traditional houses

Unit IV- Traditional Knowledge through textiles (10 Lectures)

- Weaving and varieties of textiles of ancient India, their production
- Dyeing, various Indian traditional methods
- Printing, Various Indian traditional methods
- Art of working with natural dyes, its importance and methods of dyeing

Unit V- Traditional Indian Child Rearing Practices (10 Lectures)

- Holistic Development- Physical, mental wellbeing, cognitive and emotional growth

- Cultural Identity- reconnecting with heritage, imparting values and principles to shape child's character, inculcation of moral, ethical and spiritual values,
- Traditional wisdom practices- ayurveda, yoga & meditation, parenting with grandparents, storytelling & folklores
- Communicating within family- intergenerational knowledge transfer, social and emotional development, the traditional process of socialisation

Unit VI- Traditional Indian Communication System (08 Lectures)

- Folk Media, Folk Theatre (Nautanki, Tamasha, Rangmanch etc), Folk Music, Folk dance, Visual Art, storytelling, role play
- Verbal Communication- languages, Proverbs, riddles
- Nonverbal Communication- Body language, gestures, symbolic communication, Community Gathering, Oral tradition
- Pandavani, Yakshagan, Kathputali (Various dance drama traditional techniques, spiritual and religious contents)

Unit VII-Challenges and Opportunities (04 Lectures)

- Globalisation and Urbanisation, Revitalization and integration
- Capacity Building
- Assimilating and coping with latest knowledge and technologies

Recommended Reading

1. Smriti Sinha, Ancient Ingredient Revisited, Sanrachna Prakashan, Allahabad, ISBN: 9789384999186
2. Manjari Chandra, Heal with the Food, Rupa Publication Private Ltd., ISBN: 9789355200938
3. Sanjeev Rastogi, (2014), Ayurvedic Science of Food and Nutrition, Springer, New York
4. Bharat Dogra, Kumar Gautam, India's Quest for Sustainable Farming and Healthy Food, Vitasta Publishing Pvt. Ltd., ISBN: 9789390961610
5. B.L. Bhadani, Water Harvesting, Conservation and Irrigation in Mewar (AD 800-1700)
6. Fredrick W. Bunce, The Iconography of Water: Well and Tank Forms of the Indian Subcontinent
7. K.K. Chakravarty, Gyani Lal Badam, Vijay Paranjpye, (eds) Traditional Water Management Systems of India
8. T.M.Tripathi, (2011) Hydrology in Ancient India, National Institute of Hydrology
9. A. Vadyanathan, Indias Water Resources- Contemporary Issues on Irrigation, Oxford India, ISBN 9780195696233
10. Jean Deloche, Studies on Fortification in India
11. Ramkrishna, Ayurved - Samanya Rog Aur Upchar (Hindi) (2017)
12. A. Biswas, Indian Costumes (2017)
13. Sures Chandra Banerjee and Chhanda Chakraborty, Folklore in Ancient and Medieval India (An Old Book)
14. Dr. Kiran Singh, Textiles in Ancient India (An Old and Rare Book)
15. Arthur Ernest Everest and Arthur George Perkin, (1918), The Natural Organic Coloring Matters, Longmans, Green, and Co. London, (Monograme)
16. Shailja D. Naik, (1996), Traditional Embroideries of India, South Asia Books Publishers, ISBN 978-8170247319
17. Vandana Bhandari, (1998), Textiles and Crafts of India: Arunachal Pradesh, Assam, Manipur, Prakash Book Depot,
18. Rustam J. Mehta (1979), Masterpieces of Indian Textiles
19. Ebeltje Hartkamp-Jonxis (2023) When Indian Flowers Bloomed in Europe: Masterworks of Indian Trade Textiles, 1600-1780, in the Tapi Collection, Niyogi Books Private ltd.
20. Anjali Karolia, (2018) Traditional Indian Handcrafted Textiles: History, Techniques, Processes, Designs (Vol I & II), Niyogy Books Private Ltd. ISBN 978-9385285486
21. Vaibbhavi Pruthviraj Ranavaade, (2023) Indian Sari: Sartoria and Semiotics, Routledge -Taylor and Francis Group
22. Dr. Parul Bhatnagar (2013) Traditional Textiles of India - An Artistic Evaluation, Suraj Publication
23. John Gillow, (2008), Indian Textiles, Ohm Book International
24. John Gillow, Nikolas Bernard, (1993), Traditional Indian Textiles,Thames & Hudson
25. N.N. Mahapatra, (2016) Sarees of India, Woodhead Publishers of India
26. Kanjiv Lochan Medicines of Early India: With Appendix on a Rare Ancient Text
27. Harish Johari, Michael Gerber, Dhanwantari (How India's Ancient art of living and healing can give you a healthier happier, more joyous life)
28. Malavika Kapurhemalata Mukundan, Child Care in Ancient India from the Perspectives of Developmental Psychology and Paediatrics
29. D. P. Chattopadhyaya and M. A. Dhaky Architecture in India (History of Science, Philosophy and Culture in Indian Civilization)
30. Dr. Arvind Rituraj, Dialogues with the Masses in Ancient India
31. Dilip K. Chakrabarti, History of Indian Archaeology: The Beginning to 1947
32. Colleen Taylor Sen, Feast and Fasts: A History of Food in India
33. Dilip K. Chakrabarti, The Archaeology of Ancient Indian Cities
34. Bal Ram Singh, Indian Family System: The Concept, Practices and Current Relevance
35. Amit Jha, (2009), Traditional Knowledge System in India, Atlantic publishers and distributors.

II. MAJOR COURSE- MJ 6:
RESOURCE MANAGEMENT CONCEPT AND CONTEXT

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	**Pass Marks: Th (SIE + ESE) = 40**

(Credits: Theory-04) **60 Hours**

Course Description

Resources and their management is the ultimate goal of all families. The Course introduces the conceptual and contextual meaning of resources and their management in micro level family settings in the changing world in a simple format with experiential learning to the learners. Presenting optimal initiatives and equipping students with appreciable management acumen to imbibe the contexts in their family system and the environment is the major scope.

Learning Objectives

1. Learning to identify and manage the use of resources available for functional use
2. Comprehending the purpose of managing resources
3. Setting realistic goals and being practical and prudent in the use and management of limited resources by making intelligent decisions.
4. Becoming money, time and energy conscious in daily living

Learning Outcome

1. Understanding on the concepts related to family resource management
2. Appreciation of the significance of management process in efficient use of resources
3. Imbibing nuances of human values and standards for successful management and decision making
4. Focus on management of human energy as a family resource

Course Content

Unit I Introduction to Resource Management in Family Settings (12 Lectures)

Introduction to home management- meaning, definitions, conceptual framework, need and philosophy
Concept, definition, universality and scope of family resource management. Approaches to resource management – family resources Vs home management
Ethics in management of resources – essential qualities for success
Motivating factors in management – Values, Standards and Goals – meaning, types/ classification and influences.
Theories of Motivation- Maslow's hierarchy of needs theory; human wants – nature and role in management

Unit II Resources (12 Lectures)

Concept, classification and characteristics of family resources. Factors affecting utilization of family resources,
Maximizing use of resources and resource conservation.
Natural resources: renewable and non – renewable, methods of harnessing renewable resources for residential use.

Unit III Functions of Management: An Overview (12 Lectures)

Decision Making- the crux of management, Types of decisions; factors of control, role of values, standards and goals in decision making process
Management process- Definitions and steps in management process: Planning, Controlling, Organizing and Evaluation
Significance of managing resources of the family.
Relation of Family Resource Management to other areas of Home Science

Unit IV Resource Management Process (12 Lectures)

Management process applicable to specific resources:
Money- sources of income, meaning of income and expenditure, steps in money management, Budgeting- budget items, methods of handling money
Time – concept of time schedule, time norms and peak loads
Energy – Types of effort (Manual, pedal, visual etc)., Concept of body posture, drudgery and fatigue, fatiguing activities, classification of activities (sedentary, moderate and heavy), use of labour saving devices in management of time and energy, methods of alleviating fatigue
Principles of Work simplification, Mundel's Classes of Change, time and motion studies, working heights at different levels.

Unit V Ergonomics: Role in Management of Human Resources (12 Lectures)

Ergonomics – concept and principles, work, worker and work environment relationship, role of work, workplace and equipment's (appliances) as sources of drudgery
Occupational health hazards – sources, problems and solutions
Waste management: home level solid and liquid waste management practices
Application of Management Processes in: Event Planning & Execution

Recommended Readings:

1. Bhargava, B. (2005). *Family Resource Management and Interior Decoration*, Jaipur: Apple Printer and V. R. Printers
2. Gandotra, V., and Jaiswal, N .(2008). *Management of Work in Home*, New Delhi: Dominant Publishers and Distributors. (ISBN No. 81-7888-526-3)
3. Gross. I.H., and Crandall, E. W. (1967). *Management for Modern Families*. Delhi:Sterling Publishers.
4. Nickell, P., and Dorsey, J, M. (2002). *Management in Family Living*. New Delhi: CBS Publishers (ISBN13: 9788123908519)
5. Rao V.S.P., and Narayana P.S. (2008). *Principles and Practices of Management*. New Delhi: Konark Publishers Pvt. Ltd. (ISBN 13: 9788122000283)
6. Seetharaman, P., Batra, S., & Mehra, P. (2005). *An Introduction to Family Resource Management*. New Delhi: CBS Publishers &Distributors (ISBN 13: 9788123911861)
7. Varghese, M. A., Ogale. N. and Srinivasan K. (1985). *Home Management*. New Delhi: New Age International (P) Limited, Publishers (ISBN 13: 9780852269046)

III. MAJOR COURSE- MJ 7:
PRACTICALS-II

Marks: Pr (ESE: 6Hrs) =100	Pass Marks: Pr (ESE) = 40

(Credits: Practicals-04) **120 Hours**

Instruction to Question Setter for
End Semester Examination (ESE):
There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:
Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

Part A- 60 hrs=30 classes

Since the course focuses on **Indian Knowledge Systems (IKS) and Sustainable Development**, the practical emphasizes **hands-on and experiential, activities**:

- Field-based learning
- Documentation of indigenous practices
- Hands-on demonstrations of traditional techniques
- Analysis of sustainability aspects

1. Case study review of an Indian ancient practice contributing to SDGs e.g., rainwater harvesting/ organic farming, solar energy and preparation of a brief presentation/report
2. To identify and document traditional arts, crafts, and ritual/ cultural practices in the local area through field visit to a local village/community/artisan and its documentation through photographs, videos, or written notes.
3. Visit to a local farm practicing traditional or organic methods of farming to identify indigenous crops and understand seasonal cultivation. Also prepare a chart linking crops to nutritional and sustainability benefits.
4. Demonstration of making yogurt, pickle, or other fermented product. Analyse nutritional benefits and health implications using IKS principles. Also compare traditional vs modern methods of preservation. (Khukhri, Rugda, Basnkarail, Local tribal green and leafy vegetables). Recipe documentation with nutritional and cultural notes.
5. Evaluate a week's diet based on *Prakriti* (Vata, Pitta, Kapha) and identify indigenous ingredients for common ailments (cold, digestion, immunity).
6. To understand Ayurveda-based dietary recommendations and seasonal food practices. Prepare a seasonal diet chart based on Ayurvedic principles.
7. To explore the sustainable aspects of Indian traditional housing.
    a. Visit to heritage houses to observe lighting, ventilation, and water/waste management techniques, and eco-friendly buildings using mud, lime, or stone etc..
8. Dyeing and printing of cotton and silk through natural dyes (turmeric, indigo, henna, palash, etc.). Simple block, printing, resist printing or tie-and-dye demonstration. Documentation of process.
9. Documentation of practices of traditional communication methods for knowledge transfer such as (With Audio/video recording and analysis report)
    a. Record or perform a short folk story, song, or role-play.
    b. Analyse its social and educational relevance.
10. To study traditional practices for holistic child development
    a. Interview elders/parents/grandparents about traditional child-rearing practices.
    b. Document practices by them like storytelling, folk games, and Ayurvedic care.
    c. Analyse the benefits of traditional child rearing practices for cognitive, emotional, and social development.

Part B 60 hrs=30 practical

1. Comprehend and prepare a write up on values held and goals set – for different age groups,
2. Identify resources in and around a family, their use and benefits accrued: Prepare an Inventory
3. Harnessing natural resources: model making solar devices, windmills, rainwater harvesting, water conservation measures.
4. Conservation of community and natural resources for optimization- portfolio
5. Identification and development of self as a resource
    a. SWOC analysis-who am I and Microlab
    b. Building Decision Making abilities through management games
    c. Role play d. Goal setting exercise for one academic year
6. Elucidate changing value systems in Indian conditions-pros and cons
7. Preparation of time plans for self and family
8. Time and motion studies for simplifying work – flow chart process

9. Ergonomic analysis pf different work, work places and application as sources of drudgery
10. Determining working heights for different individuals at different levels
11. Planning an event- management and evaluation with reference to
    - Managerial process
    - Resource optimization- time, money, products, space, human capital and natural resources.

Recommended Readings

1. Fitzsimmons, C. (1950). The Management of Family Resources. California. W H Freeman Co.
2. Gandotra, V., and Jaiswal, N. (2008). Management of Work in Home, New Delhi: Dominant Publishers and Distributors (ISBN No. 81-7888-526-3)
3. Grandjean, E., and Kroemer, K.H.E. (1999). Fitting the Task to the Human A Text Book of Occupational Ergonomics, New York Taylor and Francis
4. Gross.1.H., Crandall, E. W and Knoll, M. M.(1980). Management for Modern Families New Jersey: Prentice Hall Inc.
5. Nickell, P., and Dorsey, J, M. (2002). Management in Family Leving New Delhi CBS Publishers (ISBN13: 9788123908519)
6. Shukul, M., and Gandotra, V (2006). Home Management and Family Finance. New Delhi. Dominant Publishers and Distributors. (ISBN No. 81-7888-403-8)

SEMESTER V

I. MAJOR COURSE- MJ 8:
COMMUNICATION AND EXTENSION

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

The Course introduces to the students the concept of Communication and Extension. It will orient the students with creation, transmission and application of knowledge designed to bring out planned changes in the behaviour of people. Communication is an exciting and challenging field of human interaction

Learning Objectives

1. Understand the concept of Communication and its role in exchange of information
2. Examine the models and barriers to communication. Learn about the concept of extension, extension approaches and models
3. Enhance the students in the selection and use of media in different socio-cultural environment

Learning Outcome

1. Gain knowledge on the need and importance of communication and its significance in exchange of information
2. Analyse the models of Communication and role of media in societal development
3. Perceive the importance of extension education. Acquire knowledge on the extension models and approaches

Course Content

Unit-1. Communication Concept (12 Lectures)

Meaning, definition, nature, scope and importance of communication. Functions of communication information function, command or instructive function, influence or persuasive function and integrative function.

Elements of Communication three elements source, message, receiver, four elements encoding, decoding, sender and receiver, five elements message, channel and feedback communicator, communicate

Means of Communication – Oral, Written, Sign/signal, action, object Types of Communication -Formal and Informal Communication. Pattern- one way, two way, circular, Communication media, Print and electronic media Advantages and Limitations of Communication media

Unit-II. Communication Models (12 Lectures)

Importance of communication in extension. Models of Communication-Aristotle Model, Shannon – Weaver Model, Berlo Model, Schramm Model, Concept, purposes and significance of model in communication

Barriers to Communication semantic, psychological, organizational and personal

Unit-III. Effective Communication (12 Lectures)

Characteristics-Clear, correct, complete and precise message, reliability, consideration of the recipient

Skills Observance, clarity and Brevity, Listening and Understanding, self-efficacy and self-confidence, Significance Team work, Team building, problem solving and decision making skills, facilitate creativity and reduces misunderstanding. Concepts relating to communication perception, fidelity, communication gap, Empathy. Homophily, heterophily

Unit-IV. Communication and Extension (12 Lectures)

Concept, need, functions, principles and scope of extension Steps in extension teaching Elements of extension communication system. Communication methods in extension group method, mass method and individual method Advantages and limitations of communication and extension

Unit-V. Extension Models and Approaches (12 Lectures)

Models Innovation transfer model, Social education model, Indigenization model, Social action/consignation models, Empowerment participation model, Combination models Approaches General Extension, Commodity specialized, Training and visit, Agricultural, Extension participatory, project, farming systems development, cost sharing and Educational Institution approach

Recommended Reading

1. Dahama, O.P and Bhatnagar O.P. (1995). Education and Communication for Development. New Delhi Oxford and IBH Co.
2. Gupta, D. (2007). Development Commumcation in Rural Sector New Delhi Mukhopadhyay Abhijeet Publication
3. Nisha, M. (2006). Understanding Extension Education. New Delhi: Kalpay Publications
4. Reddy, A.A. (2001). Extension Education. Bapatla: Sri Lakshmi Press
5. Rogers Everett, M. (2003). Diffusion of Innovations, 5th Ed. New York. The Free Press
6. Singh, UK and Nayak, A.K. (2007). Extension Education. New Delhi: Common Wealth Publishers
7. Wilson, M.C., and Gallup, G. (1955). Extension Teaching Methods. Washington: US Department of Agriculture

II. MAJOR COURSE- MJ 9:
EARLY CHILDHOOD CARE AND EDUCATION

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

This course explores the range of issues related to Early Childhood Care and Education (ECCE). The focus of the course is on understanding the importance of early years and early interventions. The course further aims to familiarize students with indigenous (Indian) models of ECCE, pedagogical approaches and programmatic trends as they evolved in the Indian context.

Learning Objectives

1. Know the importance of early childhood years and significance of intervention programs for early childhood development.
2. Develop insight into the historical developments – global and Indian including the current programs and policies in ECCE.
3. Develop awareness of ECCE programs in different contexts in India.
4. Familiarize with indigenous (Indian) models of Early Childhood Education and explore the current early childhood research, theoretical trends and issues. To learn about different curriculum models and pedagogical approaches in early childhood education.
5. Impart knowledge on programme planning for young children.

Learning Outcome

1. Explain the importance of early childhood years and significance of intervention programs for early childhood development.
2. Describe the historical developments – global and Indian including the current programs and policies in ECCE.
3. Identify various indigenous (Indian) models of Early Childhood Education and apply it to understand the current early childhood research, theoretical trends and issues.
4. Analyze curriculum models and pedagogical approaches in early childhood education.
5. Create developmentally appropriate programs for young children.

Course Content

Unit-I Introduction to Early Childhood Care and Education (10 Lectures)

Concept, meaning, scope and significance of ECCE

- Developmental perspective
- Neuroscience perspective
- Human rights perspective
- Expansion from ECE to ECCE to ECD.
- Aims and objectives of ECCE– General and specific

Types of ECCE service delivery – Formal and informal; Government funded, Philosophy oriented, Laboratory nursery school, Franchise oriented

Unit-II ECCE in India (14 Lectures)

History of Early Childhood Care and Education in India.

Overview of ECCE in pre and post-independence period. Preschool education in the pre and post-independence era (very brief). How the international trends have influenced the national trends.

Contributions of educational philosophers: global and Indian perspective- views of educationists and philosophers: Rousseau, Pestalozzi, Froebel, McMillan Sisters, John Dewey and Montessori, Sri Aurobindo, Tagore, Gijubhai Badheka, Tarabai Modak, Mahatma Gandhi.

Present status of young children in India.

Policy perspectives in ECCE

Recent Policies in ECCE-Various Education commissions of India:

- National Policy on Education (1986) Programmes / schemes and innovations in ECCE –ICDS, Balwadis, mobile crèches
- National Curriculum Framework 2005
- National Policy on Early Childhood Care and Education 2013
- Curriculum Framework for Early Childhood Care and Education 2012/2013,
- New Education Policy (NEP) 2020.

Unit-III Early Childhood Curriculum (12 Lectures)

Definition and concept of curriculum

Curriculum approaches – subject centered, learner centered, community centered

Components and essential features of developmentally appropriate ECCE curriculum Planning a developmentally appropriate curriculum- approaches, key principles and types of plans

Unit-IV Play and its Importance **(12 Lectures)**

Play and its characteristics
Theories of play- surplus energy theory, recreational theory, recapitulation theory Stages and types of play
Role of play in overall development of children
Teacher's role in creating environment and promoting play
Use of play way approach in the curriculum for young children.

Unit-V Innovative ECCE Models **(12 Lectures)**

Nutan Bal Shikshan Sangh, India
Daxinamurti Bal Mandir, India
Gram Bal Shikshan Kendra, India
Lok Jumbish Program, India
Mirambika, India
Rishi Valley, India
High/Scope Model, USA
Reggio Emilia Approach, Italy
Te Whãriki Model, New Zealand
The ECEC Model, Sweden
Seto Gurans National Child Development Services, Nepal

Recommended Readings

1. Agarwal, J. C. (2007). *Early childhood care and education: principles and practice*s. New Delhi: Shipra
2. Agarwal, S.P. and Usmani, M. (2000). *Children's education in India: from vedic times to twenty first century* New Delhi:
3. Canning, N. (2010) *Play and practice in the early years: Foundation stage*. New Delhi: Sage.
4. Kaul, V. (2009). *Early childhood education programme.* National Council of Educational Research and Training, New Delhi.
5. Purkait, B.R. (2005). *Milestones in modern Indian education*. Kolkata: New Central Book Agency.
6. Swaminathan, M.(ed.) (1998), *The first five years: A critical perspectives on early childhood care and education in India*. New Delhi: Sage.
7. Saraswathi, T.H., Menon, S. & Madan, A. (eds.) (2018) *Childhoods in India traditions, trends and transformations.* New Delhi. Routledge.
8. Sharma, K.K., & Miglani, P. (2016). *Gender, school and society*. Patiala: Twenty First Century Publications.
9. Singh, A. (1995). *Playing to learn: A training manual for early childhood education*. Chennai: M. S. Swaminathan Research Foundation.
10. प्रसाद आशा कुमारी, (२०१४), पूर्व प्राथमिक शिक्षा, विनोद पुस्तक मंदिर,
11. Sinha Arati and Bhargava Rajshee, Purv Balyavastha Shiksha ka Vyavasthapan evam Prabandh: Early Childhood Education Administration and Management, Motilal Banarasidas Publishing House, ISBN**:** 9789381427200, 9381427208

III. MAJOR COURSE- MJ 10:
FUNDAMENTALS OF CLOTHING CONSTRUCTION

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

It is designed to develop skills in students related to clothing manufacturing techniques using appropriate tools and preparation of fabric for clothing construction. It deals with the components of garments, material selection and techniques of construction. The knowledge of fundamentals of clothing construction will enable the students to make sound decisions related to material resources through the application of clothing construction and application skills. This will prepare students for advanced studies and professional employment in the areas of clothing and textiles.

Learning Objectives

1. Develop an understanding about the basics of clothing construction
2. Learn about the principals involved in clothing construction.
3. Know about various sewing equipment that are essential in a sewing room.
4. Learns to construct garment.
5. Develop skill in coordinating fabrics, patterns and supportive materials

Learning Outcome

A successful completion of this course will enable students to

1. Understand basic principles of clothing construction.
2. Comprehend the importance and function of clothes, Identify the common fabrics, utilize design components in garment construction, understands various garment construction process
3. Gain an insight of various sewing machines and other sewing equipment's available in the market, their functioning & common problems faced while usage
4. Co-ordinates fabrics, patterns and supportive materials and construct the garment

Course Content

Unit I Introduction to Clothing **(10 Lectures)**

History of Clothing. Origin of Clothing
Use of clothing among primitive people
Functions and theories of clothing
Clothing in relation to culture
Psychological aspects of clothing
Self-respect, self-enhancement, self-expression, gender desirability and individuality
Socio-psychological aspects of clothing among children
Significance of uniforms and national costumes.
Clothes for conformity, mobility and aesthetic appearance.
Terminology: Clothing, fabric, fashion, fad, silhouette, weaving, knitting, felting, plackets, brands, clothing symbolism, tradition,

Unit II Sewing Machines **(10 Lectures)**

Types of sewing machines -Mechanical Sewing Machine. Electronic Sewing Machine. Computerized or Automated Sewing Machine. Embroidery Machine.
Parts of sewing machine, Types and function Maintenance, Common problems and its remedies.
Tools and equipment used for clothing construction Measuring tool, Drafting Tool, Marking Tool, Cutting Tool, Stitching Tool, Pressing Tool,
Needles, threads and their relation to fabric, Types of needles for hand and machine sewing
Types of threads hand and machine sewing
Selection of right thread, needle for the fabric to be sewn.

Unit-III. Introduction to Clothing Construction **(10 Lectures)**

Anthropometric measurements Introduction and importance
Instruments used for anthropometric measurements Standardization and size charts.
Importance and use of size charts Size charts of child, woman and man Factors affecting selection of fabrics, Social factors, Economic factors, Physiological factors, Environmental factors.

Unit-IV. Design Components **(10 Lectures)**

Elements and Principles of Design Introduction
Basic elements of design, Basic principles of design

Relation between elements and principles of design to the Clothing and Fashion, Color, line and texture in relation to: Age, Season, Occasion, Figure Type, and Complexion

Unit-V. Components of Garments (10 Lectures)

Garment Silhouettes
Introduction to basic Garments-Skirts. Blouses Pants
Introduction to Garment detailing for Necklines, Fullness, Pockets, Seams, Sleeves, Yoke and Plackets.

Unit VI- Traditional Costumes of India (10 Lectures)

Traditional costumes of Northern India Jammu and Kashmir, Punjab, Haryana Traditional costumes of Western India Rajasthan, Gujarat, Maharashtra
Traditional costumes of Southern India Andhra Pradesh, Tamil Nadu, Kerala, Karnataka Traditional costumes of Eastern India Orissa, West-Bengal, Assam, Nagaland, Meghalaya, Manipur, Arunachal, Mizoram, Tripura
Traditional costumes of Central India Uttar Pradesh, Madhya Pradesh and Bihar

Recommended Readings:

1. Armstrong, Pearson. (1995), Pattern making for Fashion Design, Fairchild Publication, New York 1995 (Indian Ed.)
2. Cream, Penelope.,(1996), The Complete Book of Sewing - A Practical Step by Step Guide to Sewing Techniques, DK Publishing Book, New York ,
3. Dorothy wood, The Practical Encyclopaedia of Sewing, Annees Publishing Ltd, London.
4. Holman, Gillian. (1997), Pattern Cutting Made Easy, BSP.
5. Janace E. Bubonia. (2012), Apparel production terms and processes, Fairchild Books, New York.
6. Kallal, Mary Jo, (1985), Clothing Construction, Mc Millan Publishing Company, New York.
7. Norma Hollen, Jane Saddler, Anna L. Langford & Sara, J.,(1988) Textiles 6th ed., Macmillan Publication, New York
8. Readers, Digest, Complete Guide to Sewing, The Reader's Digest Associations (Canada) Ltd. Montreal, Pleasantville, New York.
9. Thomas, A, (1986), the Art of Sewing UBSPD Publishers Distributors Ltd. New Delhi.

IV. MAJOR COURSE- MJ 11:
PRACTICALS-III

Marks: Pr (ESE: 6Hrs) =100	Pass Marks: Pr (ESE) = 40

(Credits: Practicals-04) **120 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

Practicals:

Part A **40 Hrs= 20 Classes**

1. Developing skill in planning and conducting small group communication.
2. Preparation of Communication Models
3. Apply communication methods in the implementation of program
4. Interaction with villagers and understand the felt and unfelt need
5. Carryout a case study using any one Extension approach

Part B **40 Hrs= 20 Classes**

1. Observation of early childhood programs at government and non-governmental institutions.
2. List the activities for each domain to promote all round development in young children.
3. Plan and record activities and methods of playful interactions to foster development in children (birth-two years and two-six years)
4. Conduct workshops in any two of the following Developing worksheets to teach readiness concepts Enhancing social and language skills, Music, movement and drama for children
5. Prepare a developmentally appropriate plan and its implementation.
6. Methods and Tools to assess progress of children and programme
7. Designing and preparation of
   - Low-cost play material/ equipment
   - Game or Toy based on developmental needs
   - Teaching Aids
   - Play based activities

Part C **40 Hrs= 20 Classes**

1. Preparation of fabric for cutting
   a. Preshrinking
   b. Identification and straightening of Grain
2. Taking measurements directly from body
3. Tools and Equipment used in Garment Construction: Squares and Scales, French curve -For armhole, necklines etc.
4. Preparing Samples of
   - Basic Hand Stiches- basting, back stitch, hemming visible/ invisible, lock stitch
   - Seams- Plain seam, and decorative seam
5. Fullness
   - Darts- Single point, Fish dart
   - Tucks- Pin tucks, wide tucks, corded tucks, criss crossed tucks
   - Pleats – Knife, Box, inverted box, accordion pleats
   - Gathers- Hand and machine, shirring
   - Ruffles and frills
6. Neckline finishes- Binding and facing
7. Pockets- Patch and in seam
8. Button and fasteners attachment
9. Plackets: Faced and continuous bound
10. Introduction to drafting method and stitching of the following garments.
    a. Petticoat/Apron/Kalidar Kurta
    b. Drafting on paper
    c. Transferring pattern markings from paper

d. Fabric cutting
e. Stay stitching
f. Sewing on machine

11. Preparation of portfolio with

- Pictures of Traditional Textiles with introductory analysis
- Pictures of Traditional Costumes with introductory analysis

Recommended Reading

1. Agarwal, J. C (2007). Early childhood care and education, principles and practices. New Delhi
2. Agarwal, J.S., (2010), Early Childhood Education Foundation and Practice, National Psychological Foundation,
3. Canning, N. (2010) Play and practice in the early years Foundation stage New Delhi Sage
4. Readers, Digest, Complete Guide to Sewing, The Reader's Digest Associations (Canada) Ltd. Montreal, Pleasantville, New York
5. Thomas, A, (1986), the Art of Sewing UBSPD Publishers Distributors Ltd. New Delhi
6. Dahama, O.P and Bhatnagar OP (1995). Education and Communication for Development. New Delhi: Oxford and IBH Co
7. Nisha, M. (2006). Understanding Extension Education. New Delhi: Kalpay Publications
8. Reddy, A.A. (2001) Extension Education. Bapatla. Sri Lakshmi Press

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SEMESTER VI

I. MAJOR COURSE- MJ 12:
FAMILY FINANCE AND CONSUMER BEHAVIOUR

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	**Pass Marks: Th (SIE + ESE) = 40**

(Credits: Theory-04) **60 Hours**

Course Description

Consumer is the king in the consumer market. Consumers' behaviour and attitude reflects their living styles which *per se* will be the delineation of their family finance management practices. The Course exposes students to real life situations for realizing their role as consumers as well as financial managers in family settings

Learning Objectives

1. Provide situations to understand significance of family income and expenditure and saving for future
2. Register and react as responsible consumers
3. Analyze relevance of consumer movement in India
4. Gain knowledge on consumer protection Laws and Acts and reflect upon personal rights and responsibilities

Learning Outcomes

1. Becoming familiarized to the changing trends in consumerism
2. Enriched Knowledge on market systems
3. Emerge as informed consumers
4. Review the benefits of planned financial management

Course Content

Unit I Consumer and the Market **(12 Lectures)**

Consumer: definition and meaning; consumer Vs customer
Role of consumers in the economy, National Income, Per Capita Income, Household wise distribution of income
Classification of Consumer goods
Consumer and the market: definition and classification of markets, types Consumer demand and supply
Channels of distribution
Consumer behaviour: changing nature of consumer behaviour to suit modern market and
business trends – concepts of C2C, B2B, B2C, C2B etc; Factors influencing Consumer behavior
Meaning, characteristics of buyer behaviour, buying motives – types; consumer buying process;
Change in consumer purchase practices in the digital market – concept of e-commerce, m-commerce, online shopping etc; Extended use of plastic currency and cards

Unit II Household Income and Expenditure **(12 Lectures)**

Household Income – Types, Sources, Supplementation of family income, use of family income, per capita income
Household expenditure: Items of expenditure, mental and written plans, Factors influencing expenditure pattern, expecting exigencies and tackling them
Account maintenance: methods of account keeping like balance sheets, account books, ledgers, income-expenditure records
Process of budgeting- steps in drafting a family budget, balancing income and expenditure, ways to meet emergent expenses
Personal finance management: Tax implications: significance in budgeting, measures adopted and instruments used to ensure tax benefits, calculation of personal income tax for an individual's monthly income
Engel's Laws of consumption, drafting well balanced family budgets

Unit III: Family Savings and Credit Practices **(12 Lectures)**

Consumer credit- Concept, meaning, need, sources, credit cards, credit services availed by the family members, types of loans availed by families
Mortgages: Definition and conceptual meaning, significance in meeting emergent needs of expenditure
Financial security arrangements: Family savings and investments- need, principles, channels of investment
Savings and savings institutions, merits and demerits of each Guidelines for wise savings practices

Unit IV: Consumerism in India **(12 Lectures)**

Consumerism: genesis, reasons for consumer movement Historic Declaration of Consumer rights
Consumerism in India
Consumer problems – types, nature, causes and solutions

Concern for the Consumer: Consumer education: Meaning and definition; need and scope, objectives, aspects, methods, contents and resources, Problems

Consumer education and empowerment: meaning, need and achievements with specific relevance to India

Consumer aids: classification – Labels, Trademarks, Brand Names, Patents, Warranty, Guarantee, Quality Control and After Sales Service, Government and Voluntary Agencies, Role of advertisements influencing consumer behaviour

Product labeling and packaging – significance to fair practices

Unfair consumer practices: adulteration and faulty weights and measures

Green Consumerism-Meaning and importance with respect to consumerism, need, consideration in daily consumption and significance, ethos of adopting sustainable/eco- friendly lifestyle as green consumers

Unit V: Consumer Protection (12 Lectures)

Consumer protection: concept, need and significance Consumer rights and responsibilities in India

Consumer organizations – origin, functioning, role and types Consumer cooperatives – role, history and growth in India

Consumer redress: role of consumer forums and consumer courts in safeguarding consumers Basic legislative framework for consumer protection in India- Consumer Protection Act 1986 (COPRA), Alternative redressal mechanisms, Mediation centres

Standardization and quality control measures: Role of ISI, FPO, AGMARK, ISO, Eco mark, Wool mark, Silk mark, Cotton mark, Handloom mark, BEE Star labeling and others

Consumer Protection Act 2019

Recommended Readings:

1. Gangawane, L. V., and KhilareV. C. (2007). *Sustainable Environmental Management: Dr Jayshree Deshpande Festchrift Volume.* Delhi: Daya (ISBN 13: 9788170354741)
2. Gupta, C.B., and Nair, R.N. (2004). *Marketing Management*. New Delhi: Sultan Chand and Sons
3. Kathiresan, S., and Radha, V. (2004). *Marketing*. Chennai: Prasanna Publishers
4. Khanna S.R., Hanspal S., Kapoor S., & Awasthi H.K. (2007). *Consumer Affairs. New* Delhi: Universities Press India Pvt. Ltd.
5. Nair R., and Nair S, R. (2003). *Marketing*. New Delhi: Sultan Chand and Sons
6. Nair, S (2002). *Consumer Behaviour.* New Delhi: Sultan Chand and Sons
7. Pattanchetti, C.C., and Reddy (2002). *Principles of Marketing*. Coimbatore: Rainbow Publishers
8. Sawhney, H.K., &Mital, M. (2007). *Family Finance & Consumer Studies*. New Delhi: Elite Publishing House Pvt. Ltd.
9. Seetharaman, P., and Sethi, M. (2001). *Consumerism: Strength and Tactics*. New Delhi: CBS Publishers.
10. Wagner, S. (2003). *Understanding Green Consumer Behavi* Routledge (ISBN 9780415316194)

II. MAJOR COURSE- MJ 13:
FAMILY MEAL MANAGEMENT

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

Course investigates how nutrition requirements and challenges change throughout the human lifecycle and how alteration in nutritional requirements impact on human health. The course also investigates the influence of nutrition prior to and during conception and to highlight the importance of good maternal nutrition during pregnancy and lactation and the impact of poor nutritional balance on fetal and infant development and maternal health. The course will cover the assessment of normal growth and body development during childhood and adolescence and will conclude with a full review of current literature and research on nutrient needs and factors affecting the nutritional status of adults and the elderly.

Learning Objectives

1. Study the growth and development during various stages of life span
2. Understand the basics for recommending the dietary allowances
3. Study nutritional needs at different stages of life span
4. Gain experience in planning adequate diets for different age groups and for different income groups.

Learning Outcome

1. Design food plans and assess the adequacy of diets to meet the nutritional needs of humans at various stages of life cycle.
2. Assess nutrition issues and conditions and also recommend nutrition intervention and support to promote the health and wellbeing.
3. Have the knowledge, both to develop and critique nutritional interventions designed to improve human health and well-being at specific age associated time points.
4. On completion of the course students will be able to critically assess nutritional requirements and nutritional health status of an individual.

Course Content

Unit-I. Introduction to RDA and Balanced Diet (10 Lectures)

Basic concept and purposes of Recommending the Dietary Allowances, Factors Affecting Recommended Dietary Allowances

Requirements and Recommended Dietary Allowances for various age groups Uses of ICMR- RDA in planning balance diet

Exchange system and Dietary Diversity

Unit-II. Nutrition in Pregnancy and Lactation (14 Lectures)

Physiological Changes occurring during Pregnancy

Importance of Food and Nutritional Care and Requirements during pregnancy General Dietary and Nutritional Problems and Complications,

Physiology and Hormones involved in Lactation Food supplements and galactagogues.

Factors Affecting the Volume and Composition of Breast Milk, Nutritional Requirements during lactation

Unit-III. Nutrition in Infancy (12 Lectures)

Growth and Development of Infants,
Composition of Human Milk and Human Milk Substitute,
Bottle Feeding and related Problems,
Weaning and Supplementary Feeding Foods,
Feeding Problems and Complications.
Use of growth charts and standards and prevention of growth faltering

Unit-IV. Nutrition in Childhood and Adolescence (12 Lectures)

Growth and Development of Pre School, School Going Children and Adolescence.
Food and Nutritional Requirements,
Factors to be considered while Planning Diet for Children and Adolescents,
Growth Spurt during Adolescence.
Food Habits, Dietary Guidelines, Food and Nutritional Requirements,
Nutritional and Behavioral Problems and Eating Disorders

Unit-V. Nutrition for Adults and Elderly (12 Lectures)

Reference Man and Reference Woman,
Food and Nutritional Requirements for Adults doing Different Activities Processes of Aging,
Food and Nutritional Requirements of Elders,
Nutrition Related Problems of Old Age, Dietary Guidelines and diet Modifications.

Recommended Reading

1. Mahtab, S, Bamji, Kamala Krishnasamy, Brahmam, G.N.V. (2012) *Text Book of Human Nutrition*, Third Edition, Oxford and IBH Publishing Co. P. Ltd., New Delhi.
2. Srilakshmi, B. (2013), *Dietetics*, New Age International (P) Ltd., New Delhi.
3. Sunetra Roday (2017). *Food Science and Nutrition*, Oxford University Press, New Delhi
4. Longvah, T, Ananthan, R, Bhaskarachary, K, Venkaiah, K. (2017). *Indian Food Composition Tables (IFCT),* Indian Council of Medical Research, National Institute of Nutrition, Hyderabad.
5. Shakuntala Manay, Shadaksharaswamy. M (2013) *Foods, Facts and Principles*, New Age International Pvt Ltd Publishers, 2nd Edition) Ltd., New Delhi.
6. Swaminathan, M. (2012), *Advanced Textbook on Food and Nutrition,* Vol. 1, Second Edition, Bangalore Printing and Publishing Co. Ltd., Bangalore.

III. MAJOR COURSE- MJ 14:
COMMUNICATION PROCESS AND MEDIA

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

The Course enables the students to understand the concept and process of communication. Apply knowledge of communication and be able to evaluate the theoretical approach used in the inter disciplinary field of communication and learn the concept of diffusion of innovations and adoption

Learning Objectives

1. Understand the concept and process of communication for development
2. Acquire skill in information education and communication
3. Learn the concept of diffusion and acquires skill to transfer the Innovation
4. Strengthen the knowledge of traditional and modern media m development communication

Learning Outcomes

1. Explain the basic concept, nature and significance of Communication model
2. Learn the communication channel and skill. Analyse the media in development communication
3. Understand the adoption and diffusion process to help the extension agents to accelerate them

Course Content

Unit-I. Communication Model (12 Lectures)

Concept of communication model and significance. Functions teaching elements of communication process, conducting research, predicting the success of failures of communication process. Importance of communication model- easy understanding of communication process, showing information flow, introducing the parts of communication process, easy presentation of communication process and understanding the communication process.

Unit-II. Methods of Communication (16 Lectures)

Extension methods of communication – Individual method – Farm and home visit, farmer's call, personal letter, adaptive or mini kit trial, farm clinic. Group method result demonstration, method demonstration, group meeting, small group training, field day or farmer's day and study tour. Elements of extension communication system-communicator, message, channel treatment and presentation, audience, audience response. Characteristics of change agent empathy, linkage, structure, synergy, energy, proximity, openers. Role and competencies of change agent broad knowledge, operational and relational knowledge, sensitivity and maturity, authenticity

Unit-III. - Media in Development Communication (12 Lectures)

Traditional media types (folk songs, drama, and puppetry) characteristics and role in development communication
Radio Origin and history, communication news, features and commentaries, role in development. Television and cinema history, features and role in development communication ICTs-scope and development communication

Unit-IV. Diffusion of Innovations (10 Lectures)

Diffusion-concept, elements of diffusion, difference between communication and diffusion Innovation form, functions and meaning of innovation, perceived attributes of innovation, preventive innovation

Unit-V. Adoption (10 Lectures)

Definition, adoption process-diffusion network the innovation decision process, the innovation decision period, rate of adoption, mandates for adoption, over adoption, adopter categories, measurement of adoption, role of extension agent in the adoption and diffusion of innovation.

Recommended Reading

1. Gupta, D (2007) Development communication in Rural Sector New Delhi:
2. Meenakshi Raman and Sangeetha Sharma (2013). Technical Communication-Principles and Practice New Delhi: Oxford University Press
3. Mukhopadhyay Abhijeet Publication
4. Nair, R. (1993) Perspectives in Development Communication. New Delhi
5. Nisha, M. (2006) understanding Extension Education. New Delhi Kalpay Publications
6. Parveen Pannu and Yukı Azaad Temer. (2012). Communication Technology for Development. New Dellu International Publishing House Pvt Ltd.
7. Ray, G.L (2015) Extension Communication and Management. Ludhiana Kalyanı Publishers $ Reddy, A.A. (2001). Extension Education. Bapatla: Sri Lakshmi Press
8. Rogers Everett M. (2003). Diffusions of Innovations. 5th Edition New York Sage Publication
9. Singh, UK and Nayak, A.K. (2007). Extension Education. New Delhi: Common The Free Press, Wealth Publisher

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IV. MAJOR COURSE- MJ 15:
PRACTICALS-IV

Marks: Pr (ESE: 6Hrs) =100	Pass Marks: Pr (ESE) = 40

(Credits: Practicals-04) **120 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

Practicals:

Part A **40 hrs= 20 Classes**

1. Evaluation and designing of advertisements in the print media including products, services and social ads.
2. Evaluation and designing of informative and attractive labels for different type of food products.
3. Visit of banks and post offices to understand their services and product
4. Learning to fill different bank forms for depositing money, start fixed deposit or recurring deposit and other schemes.
5. Assignments on Consumer credit - merits and demerits
   Online shopping advantages and disadvantages
   Credit and debit card usage pros and cons
6. Preparation of Family Budget for different income groups.
7. Learning to calculate taxable income of a salaried individual
8. Visit to various types of consumer market to observe functioning, products sold, labels information, and packaging type
9. Collection of various logos for various types of products (Food, clothing, electronic goods, jewelry etc.) and its significance

Part B **40 hrs= 20 Classes**

1. Planning, Preparing and Evaluating Menu during Pregnancy
2. Planning, Preparing and Evaluating Menu during Lactation.
3. Planning, Preparing and Evaluating Menu for Infants (Supplementary Foods)
4. Planning. Preparing and Evaluating Menu for Preschoolers
5. Planning, Preparing and Evaluating Menu for School Going Children
6. Planning, Preparing and Evaluating Menu for Adolescent
7. Planning, Preparing and Evaluating Menu for Adult
8. Planning, Preparing and Evaluating Menu for Elderly

Part C **40 hrs= 20 Classes**

1. Preparation of charts, posters, flash cards, Pamphlet, Notice
2. Preparation of IEC material on various topics for different group
3. Selecting the target audience
4. Project preparation on specific area in development communication
5. Case studies in development communication

Recommended Readings

1. Gupta, D (2007) Development communication in Rural Sector New Delhi
2. Meenakshi Raman and Sangeetha Sharma. (2013). Technical Communication-Principles and Practice. New Delhi Oxford University Press
3. Nisha, M. (2006). Understanding Extension Education. New Delhi: Kalpay Publications
4. Parveen Pannu and Yukı Azaad Tomer (2012). Communication Technology for Development. New Delhi International Publishing House Pvt. Ltd
5. Ray, G.L. (2015). Extension Communication and Management. Ludhiana: Kalyani Publishers
6. Reddy, A.A. (2001). Extension Education. Bapatla. Sri Lakshmi Press
7. Singh, UK. And Nayak, A.K. (2007). Extension Education. New Delhi: Common The Free Press, Wealth Publishers.

SEMESTER VII

I. MAJOR COURSE- MJ 16:
RESEARCH METHODOLOGY IN HOME SCIENCE

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

This course provides a comprehensive introduction to the fundamentals of research methodology, equipping students with the knowledge and skills necessary to design, conduct, and interpret research across various disciplines. It covers essential topics from defining research problems and selecting appropriate designs to data collection, analysis, and ethical considerations.

Learning Objectives

The main objective of this course is to introduce the basic concepts in research methodology in Social science. This course addresses the issues inherent in selecting a research problem and discuss the techniques and tools to be employed in completing a research project. This will also enable the students to prepare report writing and framing Research proposals.

Learning Outcomes

1. Students who complete this course will be able to understand and comprehend the basics in research methodology and applying them in research/ project work. This course will help them to select an appropriate research design.
2. With the help of this course, students will be able to take up and implement a research project/ study.
3. The course will also enable them to collect the data, edit it properly and analyse it accordingly. Thus, it will facilitate students' prosperity in higher education.
4. The Students will develop skills in qualitative and quantitative data analysis and presentation.
5. Students will be able to demonstrate the ability to choose methods appropriate to research objectives.

Unit 1: Research- Meaning, purpose and approaches (15 Lectures)

Types of Research-Exploration, Description, Explanation,
Scientific method and research, Research Designs-Experimental and Observational
Quantitative and Qualitative approaches, Variables, concepts and measurement
Levels of measurement-nominal, ordinal, interval, ratio

Unit II: The Research Process (15 Lectures)

Defining the research problem, questions, objectives, formulation of hypotheses
Review of related literature and originality in writing, citations in research
Citation formats: in medical sciences, social sciences
Planning the research, Subjects context, Methodology and tools
Ethical issues in research -Plagiarism and how to avoid it, Intellectual property rights and copyright

Unit III: Sampling Method, Tools & Techniques (15 Lectures)

Role of sampling in research, Types of sampling
Data collection process: conducting interviews, FGDs, case studies
Research Tools and Techniques – Interviewing and observational methods, Formulation of questionnaire, interview schedule, observational method, its Validity and reliability

Unit IV: Classification and Tabulation of Data (15 Lectures)

Measures of central tendencies and variables, Graphical representation and interpretation of data

Recommended Readings

1. Kumar, R. (2005) Research Methodology: A Step by Step Guide for Beginners. Sag Publications, New Delhi.
2. Kerlinger F. N. and Lee, H. B. (2000) Foundations of Behavioural Research 4th Ed. Harcou College Publishers
3. Kothari, C. R. (2008) Research Methodology: Methods and Techniques 2nd Ed. New International Pvt Ltd, New Delhi.
4. Black, J.A. & Champion, D. J. (1976) Methods and Issues in Social Research. New York: J Wiley and Sons.
5. Research methods: The essential Knowledge Base, 2nd edition -william Trochins, James P. Donnelly, Kanika Arora. cengage Learning Publication, 2016, ISBN-13: 978-1133954774.
6. Research Design: qualitative, quantitative and mixed methods Approaches, 6th edition, John w. Creswell & J David creswell, Sage publications, 2022 ISBN-13: 978-1071817964.
7. Research methodology, Ramanaiah malla, Bondala Ramkrishna, Robbi Meeraja, Dharmana Lokanadham, 1st edition ISBN-13:978-81-964810-5-6.
8. सामाजिक शोध सिद्धांत एवं व्यवहार, डी. के. लाल दास, Rawat publication, 2017 ISBN 978-81-316-0858-6(HB)

II. MAJOR COURSE- MJ 17:
PUBLIC HEALTH NUTRITION

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course description

The focus of this course is to examine the role of the dietician/nutritionist in identifying health and nutrition problems and integrating nutritional services with medical and social services within the community. This course will also provide basic knowledge and skills relevant to the practice of community nutrition, the concept of community, the role of nutrition in health promotion and perspectives for resolving community nutrition problems, Needs for assessment issues and national and state community nutrition programs, determinants of health outcomes, measurement of nutrition and health status, food and nutrition policy, legislative issues and management of community programs

Learning Objectives:

1. To know the basics of public health nutrition
2. To understand the need of prioritizing nutrition issues
3. To assess the nutritional and Health Status of an individual and the community.
4. To learn nutritional programmes and policies to overcome malnutrition
5. To understand various national and International nutritional organizations for combating malnutrition
6. To apply ICT in the formulation of community nutrition education programme

Learning Outcomes:

1. Finally, the concepts and knowledge required for the delivery of community nutrition services will be applied to program planning, intervention and program evaluation
2. Gaining knowledge on nutritional programmes and policies overcoming malnutrition
3. Understanding the national, international and voluntary nutritional organizations to combat malnutrition
4. Able to organize community nutrition education programme with the application of computers
5. Apply immunological intervention programmes to overcome epidemic of communicable diseases.

Course Content

Unit-I. Introduction to Public Health Nutrition and National Development (12 Lectures)

Meaning and Scope of Public Health Nutrition. Roles and responsibilities of public health nutritionists.

Definitions of optimum health, malnutrition (undernutrition, overweight, obesity, micronutrient deficiency), nutritional status, nutrition intervention, food & nutrient supplements, nutrition education, morbidity, mortality rates.

Nutrition- A Global Developmental Priority, Importance of nutrition throughout the life cycle, Dual burden of malnutrition

Sustainable Development Goals (SDGs), 12 of the 17 Goals require good nutrition to be met Ecology Consequences and of Malnutrition,

Strategies to Overcome Malnutrition, Relation of nutrition to national development, Nutrition and food security.

Unit-II. Nutritional Assessment (12 Lectures)

Introduction, Definition of Nutritional Status, Objective and Classification of nutritional assessment Methods, Standard of Reference, Instruments and Measurement Techniques: Age Assessment, Weight, Linear Measurement/Height, Circumferences, Soft Tissue Subcutaneous Fat.

Various nutritional status assessment methods:

i. **Direct Nutritional Assessment parameters** (anthropometry, clinical signs and symptoms, and biochemical parameters), ecological parameters: environment, Food prices, and indirect parameters – Socio economic status, Mortality and Morbidity rates

a. **Anthropometric measurements**

Techniques commonly used in public health (weight for age, weight for height, height for age & BMI for age), Comparison of indices with references

The new WHO growth standards, its use and implications and classification to define mild, moderate & severe forms of malnutrition

New WHO growth standards for Adolescents, implications of introducing new standards in school health program)

b. **Clinical Examination**

Nutrient deficiency- signs & symptoms

Grouping of Signs.

c. **Biochemical Estimation**

Name of assessment of parameters, Reference value/Desirable Level of nutrients and their Metabolites in body tissues Lipids & Lipoproteins (TG. LDL and HDL cholesterol and their ratios) Carbohydrates (blood and urinary glucose)
Protein (serum protein, albumin, NEAA/EAA ratio, hydroxyproline index, urea/creatinine ratio, etc.)
Iron (Hb, HcT, serum iron, transferrin, ferritin)
Vitamin A (serum retinol, carotene)
Vitamin D (serum alkaline phosphatase, calcium and phosphorous)
B-complex vitamins, including Folic acid & Vitamin B12 (urinary excretion)
Vitamin C (serum ascorbic acid, whole blood ascorbic acid)
Iodine (T3, T4, urinary excretion)
Sodium, potassium, chloride and Fluoride
TB Test, HIV Test CD4 counts

ii. Indirect Nutritional assessment-

Dietary Survey and Types of Nutritional Survey

Dietary intakes methods and understanding their usage and limitations in different field situations: 24-hour diet recall methods, Food frequency method, Weighed food inventory, food diaries and food consumption methods
Rapid assessment methods for dietary intake
Dietary Diversity Score for Household, Individual, women and children.
Vital Statistics, Age Specific Mortality Rate, Morbidity and Cause of Specific Mortality.

Unit-III. Social & Behaviour Change Communication (12 Lectures)

Concepts, components and process of communication for nutrition health promotion, Definitions of Formal-non-formal communication, Participatory communication Components of BCC (Sender, Message, Channel, Receiver)
Steps for developing a successful Social and Behavior change communication program
Evaluating and re-planning, Training workers in nutrition education programmes
Methods of education when to teach, whom to teach
Use of computers to impart nutrition education
Organization of Nutrition education programmes

Unit-IV. National, International and Voluntary Organizations to Combat Malnutrition (12 Lectures)

Role of Nutrition in Achieving Global Targets

Optimal Infant and Young Child Feeding -Significance of the first 1000 days of life, Improving maternal, infant and young child nutrition – WHO Global Targets 2025
Nutrition Intervention programmes in India- Integrated Child Development Services (ICDS): ICDS Mission Mode, Role of AWW, Supplementary Nutrition, Balbhog, Sakhibhog, Shishubhog
Mid-Day Meal (MDM) program

Fortification program

National Programs to Combat Micronutrient Malnutrition
Prophylaxis Program (VAPP)- Iron: National Nutritional Anemia Control Program, Nutritional Program for Control of Anemia among Adolescent Girls, National Iron Plus Initiative (NIPI), Vitamin A,
Iodine -National lodine Deficiency Disorders Control Program (NIDDCP), Universal Salt Iodization (USI), Double Fortified Salt (DFS)
Diarrhea Control Program: Role of Zinc, ORS and National Deworming Campaign, Fluorosis Control Program

Organizations Working towards Meeting Global Nutrition Targets

National organization-ICAR, ICMR, CSWB, SSWB, NNMB, NIN, CFTRI, DFRL, NIPCCD and NFI, Save the Children, Tata Trusts
International Organizations – World Bank, World Health Organization (WHO), United Nations International Children's Emergency Fund (UNICEF), World Food Programme (WFP), Bill and Melinda Gates Foundation
Voluntary organizations- Global Alliance for Improved Nutrition (GAIN) Initiatives, CARE, CRS, AFPRO, IDA, World Alliance for Breastfeeding Action (WARAJ)

Unit-V. Epidemiology of Communicable Diseases (12 Lectures)

Definition, causes, signs and symptoms, treatment and prevention of comedies,
Respiratory infections and intestinal infection, Other infections dengue, Flu
Types of immunity active, passive and herd group protection
Immunization agents- vaccines, immunoglobulin
Immunization schedules National and Expanded Programme on Immunization (EPI)- Universal, Passive, Combined, Chemoprophylaxis, non-specific measures.

Recommended Readings:

1. Park A. (2007), Park's Textbook of Preventive and Social Medicine XIX Edition M/S Banarasidas, BharatPublishers, 1167, Prem Nagar, Jabalpur. 428 001 (India)
2. Bamji M.S. Prahlad Rao N. Reddy V (2004) Textbook of Human Nutrition It Edition, Orfied and PBH Publishing Co. Pvt. Ltd, New Delhi
3. Bhatt D.P (2005), Health Education, Khel Sahitya Kendra, New Delhi
4. Gibney MJ, Margets BM, Kearney JM, Arab L (2004) Public Health Nutrition Blackwell Publishing Co UK
5. Swaminathan M (2007), Essentials of Food and Nutrition. An Advanced Textbook Vol 1, The Bangalore Printing and Publishing Co. Ltd, Bangalore
6. National Nutrition Mission-ICDS icds-wed.nic.in
7. Field guide to designing communication strategy, WHO publication-2007
8. Communication for Development (C4D) Capability Development Framework, UNICEF and 3D Change. 2009

III. MAJOR COURSE- MJ 18: PRACTICALS-V

Marks: Pr (ESE: 6Hrs) =100	Pass Marks: Pr (ESE) = 40

(Credits: Practicals-04) **120 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

List of Practical

Section I (Compulsory for both Hons and Hons with research students)

Part A **30 hrs- 15 Classes**

1. Assessing the nutritional status of an individual, group and community in different settings
2. Conducting 3 Day Weighment Survey for an Individual
3. Planning and conducting nutrition education programmes in a selected village for 3 days
4. Spot observations based on the observations through field visits in ICDS centers, MDM school program

Part B **30 hrs- 15 Classes**

1. Plan a research proposal with objective and hypothesis for a selected problem.
2. Select a size of sample using any one Sampling Technique
3. Construct a Questionnaire / Schedule for above selected problem as data gathering tool.
4. Collect data using any one of the following
    a. Interview
    b. Observation
5. Prepare a report of above project.

Section II (Select any one group as AMJ chosen- for Hons students only)

Part A – Dietetics **60 hrs- 30 Classes**

1. Preparation of Hospital Diets- Modification of diet with respect to texture, consistency and nutrients
2. Modification of Diets in Obesity
3. Modification of Diets in Underweight
4. Modification of Diets in Diabetes Mellitus
5. Diets for Febrile Conditions – TB, Typhoid
6. Modification of Diets in Peptic Ulcer, Constipation and Diarrhoea
7. Modifications of Diets in Liver Diseases – Jaundice, Hepatitis and Cirrhosis
8. Diets for Nephritis, renal Failure and renal Calculi, Protein Restricted Diets
9. Diets for Cardiovascular diseases – Sodium Restricted, Fat Controlled
10. Modification of Diet for Cancer Patients and HIV Infected Person
11. An Overview/desk review on DASH diet, Mediterranean diet, Paleo diet, FODMAP diet, Keto diet VLCD etc.

OR

Part B – Childhood and Adolescence **60 hrs- 30 Classes**

1. Preparation of an album on developmental milestones of children and adolescents.
2. Visit to a paediatric ward
3. Visit to an Anganwadi
4. Interaction with counsellors/clinical psychologists
5. Carry out a case study of an adolescent boy and girl using multiple methods
6. Select a topic related to a significant developmental problem or issue faced by children and adolescents and describe ways to assist them, their teachers and parents to deal with the problem.

OR

Part C – Fashion Marketing and Merchandising **60 hrs- 30 Classes**

1. Identify the marketplace and evaluate customers, as well as trends affecting future sales
2. Case studies to understand the buying procedures of various types of fashion retail businesses and also analyze the environment in which buying occurs.
3. Review trends, emerging and the growing retail formats where will consumers make purchases through literature and field visits
4. Describe your customers; identifying changes in consumer markets, understanding buying motives and learning about customers through data warehousing and data mining
5. Plotting customer profiles for various fashion businesses
6. Visual merchandising projects to be undertaken for different fashion businesses
7. Interact with Store managers to understand how they develop and prepare merchandise plan as well as a merchandise assortment for their business. What are their best practices?
8. Visit to various type of markets
9. Case study of fashion business to understand its supply chain management and inventory control systems

Section III Only for Hons with Research Students **60 hrs- 30 Classes**

1. Select two to three research problem selecting two objectives, choose relevant techniques and methods to obtain experimental data to fulfil the objectives. Explain the standard methodology, experiments/ survey or related protocols.

Recommended Readings

1. Park A. (2007), Park's Textbook of Preventive and Social Medicine XIX Edition M/S Banarasidas, Bharat Publishers, 1167, Prem Nagar, Jabalpur. 428 001 (India)
2. Bamji M.S. Prahlad Rao N. Reddy V (2004) Textbook of Human Nutrition It Edition, Orfied and PBH Publishing Co. Pvt. Ltd, New Delhi
3. Bhatt D.P (2005), Health Education, Khel Sahitya Kendra, New Delhi
4. Srilakshmi, B. *Dietetics, New* Age International P. Ltd., New Delhi, 2018.
5. 2. *Dietary Guidelines of Indians* – A Manual, National Institute of Nutrition, Hyderabad, 2015.
6. 3. Krause, M.V. and Mahan, L.K. *Food, Nutrition and Diet Therapy*, 9th Ed., W.B. Saunders Company,
7. Gibney MJ, Margets BM, Kearney JM, Arab L (2004) Public Health Nutrition Blackwell Publishing Co UK
8. Kumar, R. (2005) Research Methodology: A Step by Step Guide for Beginners. Sag Publications, New Delhi.
9. Kerlinger F. N. and Lee, H. B. (2000) Foundations of Behavioural Research 4th Ed. Harcou College Publishers
10. Kothari, C. R. (2008) Research Methodology: Methods and Techniques 2nd Ed. New International Pvt Ltd, New Delhi.
11. Black, J.A. & Champion, D. J. (1976) Methods and Issues in Social Research. New York: J Wiley and Sons.

IV. ADVANCED MAJOR COURSE- AMJ 1A: DIETETICS

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

(Only for Hons Degree)

Course Description

This course prepares the students to use advanced knowledge about food and nutrition for prevention as well as treatment of diseases and also maintain human health. Dietetics focuses on food management through proper planning, preparation, monitoring, implementation and supervision of a patient's modified diet and to develop basic counselling skills as dietitian

Learning Objectives

1. Understand the role of dietitian and to maintain good nutritional status, correct deficiencies or disease conditions of the patients
2. Gain knowledge on the principles of diet therapy and designing or formulating different therapeutic diets for various disease conditions
3. Develop skill to plan and prepare therapeutic dicts for prevention of disease conditions
4. Diet therapy may include prescribing specialized dietary regimes or meal plans. As entrepreneur

Learning Outcomes:

1. Integrate knowledge of research principles and methods associated with nutrition and dietetics practice.
2. Collect, organize and assess data relating to the health and nutritional status of individuals, groups and Populations
3. Demonstrate initiative and judgment using a professional, ethical and entrepreneurial approach
4. Advocating for excellence in nutrition and dietetics 4. Independently plan and execute a research project in regard to nutrition and dietetics practice.

Course Content

Unit-1. Concepts in Diet Therapy (12 Lectures)

Growth and Scope of Dietetics
Purposes and Principles of Therapeutic Diets Modifications of Normal Diets Classification of the Therapeutic Diets, Role of Dietitians Characteristics of Dieticians,
Hospital Dietary Food Service, Diet Counseling, Team Approach to Nutritional Care, Principles of Food Prescription, Indian Dietetic Association,
Computer Assisted Instructions (CAI) – Diet Planning using computers, Use of Technology in diet counseling.

Unit-II: Medical Nutrition Therapy in Obesity, Underweight and Diabetes Mellitus (12 Lectures)

Etiology, Pathophysiology, Clinical symptoms, metabolic alterations, Assessment/Indicators,
Lifestyle & Dietary guidelines for the following conditions
Obesity (Bariatric Surgery types, Management), Underweight
Diabetes Mellitus (Acute and Chronic Complications of Diabetes
Diet Modifications, Use of Food Exchange Lists, Insulin-Types and Use, Oral Hypoglycemic Agents, Carbohydrate counting, Glycemic Index, Glycemic Load)

Unit-III. Medical Nutrition Therapy in Gastro Intestinal Disorders and Diseases of the Liver (12 Lectures)

Etiology, Pathophysiology, Clinical Symptoms, Assessment/Indicators, Lifestyle & Dietary guidelines for the following conditions: Diarrhea, Dysentery, Constipation and Peptic Ulcer
Jaundice Hepatitis Fatty Liver Cirrhosis Hepatic Coma

Unit-IV: Medical Nutrition Therapy in Diseases of the Cardio Vascular System and Kidney Diseases (12 Lectures)

Etiology, Pathophysiology, Clinical Symptoms, Lifestyle & Dietary guidelines for the following Conditions
Atherosclerosis, Hyperlipidemia, Ischemic Heart Disease, Congestive Heart Failure, Bypass Surgery
Hypertension (DASH Diets) Nephrotic Syndrome Nephrolithiasis Acute and Chronic Renal Failure Dialysis Principles and Types of Kidney Stones

Unit-V: Medical Nutrition Therapy for Fever, Food Allergy and Cancer Febrile Conditions (12 Lectures)

Acute and chronic infectious disease-Typhoid, Tuberculosis and HIV and AIDS Guidelines for management of tuberculosis and infectious diseases. (12 Lectures)
Food Allergy Definition, Causes, Science and Symptoms, Types of Allergies, Diagnosis.
Dietary Modifications
Gluten sensitivity and Lactose intolerance
Cancer: Etiology, Metabolic alterations, Types of Cancer, Dietary Recommendation for Cancer Survivors.
Nutritional therapy for Cancer

Recommended Readings:

1. Srilakshmi, B. Dietetics, New Age International P. Ltd. New Delhi, 2018.
2. Dietary Guidelines of Indians A Manual, National Institute of Nutrition, Hyderabad, 2015
3. Garg, M. Diet. Nutrition and Health, ABD Publishers, 2006
4. Krause, MV and Mahan, L.K. Food, Nutrition and Diet Therapy, 9th Ed., W.B. Saunders Company. Philadelphia. 2019
5. Maimun Nisha, Diet Planning for Diseases, Kalpaz Publishers, 2016.
6. Dietary Guidelines of Indians – A Manual, National Institute of Nutrition, Hyderabad, 2011
7. Brown, J (2014). Nutrition now (7hed). Wadsworth, USA, ISBN 13:978-1-133-93653-4, ISBN 10:1-133-93653-9
8. Nelms M. Sucher K (2015). Nutrition Therapy and Pathophysiology (3 edition) Cengage Learning, USA ISBN-13: 978-1305111967, ISBN-10: 130511196n, New Delhi

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OR ADVANCED MAJOR COURSE- AMJ 1B:

CHILDHOOD AND ADOLESCENCE

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

(Only for Hons Degree)

Course Description

The course introduces students to child and adolescent development. It explains basic developmental principles and psychosocial factors which influence development from conception till 18 years. It further explores the influence of a range of issues from birth through age 18.

Learning Objectives

1. Develop an understanding about the need and importance of studying child and adolescent development
2. Develop an understanding about the historical views and theories on childhood and adolescent development
3. Learn about the characteristics, needs and developmental tasks of infancy, carly middle and late childhood, and early, middle and late adolescence
4. Learn about the biological and environmental factors that affect development during childhood and adolescence
5. Learn key issues which influence childhood and adolescent development.

Learning Outcomes

1. Explain the need and importance of studying childhood and adolescence as a distinctive stage of the life-span
2. Describe the characteristics, needs and developmental tasks of infancy, early childhood, middle childhood and early and late adolescence.
3. Identify the biological and environmental factors affecting development during childhood and adolescence
4. Analyse key issues that influence child and adolescent development

Course Content:

UNIT-I Childhood and Adolescent Development: Introduction (12 Lectures)

Concept, meaning and principles of growth and development"

Concept of critical periods of development during infancy, childhood and adolescence

UNIT-II Historical Foundations and Theories of Childhood and Adolescent Development Historical foundations and scientific beginnings (12 Lectures)

Brief overview of theories of child and adolescent development maturational, behavioral, psychosocial, cognitive, social learning.

Brief overview of theories of child and adolescent development including the maturational, behavioral, psychosocial, cognitive, social learning, ecological, and sociocultural, perspectives

UNIT-III Development across Childhood and Adolescence (12 Lectures)

Major characteristics of different stages of childhood and adolescence (infancy, early, middle and late childhood, puberty, early and late adolescence)

What are developmental tasks and milestones, and their importance

With reference to each domain of development (physical, cognitive, language, socio-emotional) characteristics, needs, developmental tasks and milestones of individuals from birth to 18 years are explained

a) Neonate (birth-1 month)
b) Infancy (1 month-2 years)
c) Early childhood (2-6 years)
d) Middle childhood (6-11 years)
e) Adolescence (12-18 years)

UNIT-IV Familial and Social Influences on Childhood and Adolescent Development (12 Lectures)

Family influences on child and adolescent development

Influence of various parenting styles on development, behavior and functioning during childhood and adolescence

Changes in self-esteem, self- concept and identity from early childhood through adolescence

Moral development from early childhood to late adolescence in relation to societal norms and social understanding

Development of gender roles and perceptions, changes in gender identity from early childhood through adolescence

UNIT-V Childhood and Adolescent Development: Key Issues (12 Lectures)

Influence of peer relationships on development

Impact of media and its influences on development and learning

Physical, psychological and social effects of substance abuse and risk behaviors Role of nutrition in childhood and adolescent development

Brief overview of aggression, gender roles and stereotypes, androgyny, friendship, popularity and rejection, sibling relations, juvenile delinquency, suicide, depression, elopement, puberty. Early/late maturation, human sexuality, eating disorders during childhood and adolescence

Recommended Readings:

1. Bhogle, S. (1999) Gender roles: The construct in the Indian context. In TS. Saraswathi (Ed.), Culture socialization and human development Theory, research and applications in India (p.p.278-300). New Delhi: Sage
2. Kapadia, S. (2017) Adolescence in Urban India: Cultural Construction in a Society in Transition. Springer 4 Keenan, T. Evans, S. & Crowley, K (2016) An introduction to child development. Sage
3. Kumar, K. (1993) Study of childhood and family In TS Saraswathi & B. Kaur (Eds). Human development and family studies in India: Anagenda for research and policy. (pp.67-76). New Delhi: Sage
4. Santrock. J (2017) A topical approach to life span development (9th ed.). New NY Megraw-Hill Higher Education
5. Saraswathi, TS., & Kaur B. (1993). Human Development and family Studies in India- an Agenda for research and Policy New Delhi. Sage
6. Saraswathi, T. & Oke, Meera (2013). Ecology of Adolescence in India. Psychological Studies. DOI 58. 10.1007/s12646-013-0225-7
7. Saraswathi, TS., Menon, S., & Madan, A. (eds.) (2018) Childhoods in India Traditions, Trends and Transformations. New Delhi. Routledge
8. Sinha, D., & Misra, R.C. (1999). Socialization and cognitive functioning. In TS. Saraswathi (Ed.), Culture, socialization and human development: Theory, research and applications in India (pp.167-187). New Delhi: Sage

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OR ADVANCED MAJOR COURSE- AMJ 1C:

FASHION MARKETING AND MERCHANDISING

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

(Only for Hons Degree)

Course Description

The course introduces students to the business aspects of fashion with a focus on fashion marketing and merchandising. It focuses on learning to capture the attention, of potential customers and promoting required products and services to them. It deals with how to understand, predict, and respond to consumer wants and behaviour to maximize business sales and revenue.

Learning Objectives:

1. Determine how business of fashion identifies its target market and adapts to deliver the desired satisfactions to the ultimate customer
2. Learns the product/merchandise presentation to potential customers
3. Understand the buying and selling of goods for the purpose of making a profit

Learning Outcomes:

Successful completion of this course will enable students to

1. Explain how fashion marketing and merchandising can help the fashion industry 2 Define role and responsibilities of fashion marketers and fashion merchandisers
2. Identify target markets and build consumer profiles for fashion products
3. Select promotional tool suitable for potential customers. 5. Develop a promotional plan and promote a merchandise
4. Establish and use inventory control systems

Course Content

Unit-1. Understanding the Basic Concepts of Fashion Marketing and Merchandising (12 Lectures)

Fashion business terminologies
Nature and scope of fashion marketing and merchandising
The marketing environment macro and micro
Areas of fashion marketing and merchandising. Public relations, brand management, event planning, customer relations, social media, advertising, retail buying, store management,
Fashion buying, visual merchandising, retail sales management
Profiles of occupations in fashion marketing and merchandising

Unit-II. Researching the Fashion Market and Consumer (12 Lectures)

The fashion consumer and organizational buyer
Segmentation and the marketing mix
Fashion marketing research: identifying the needs and wants of target customer

Unit-III. Fashion Marketing Communication (12 Lectures)

Promotion tools for fashion marketing advertising, sales promotion, packaging, public relations and publicity
Onsite Promotion: visual merchandising framework and approaches

Unit-IV. Merchandise Management Types of Merchandise (12 Lectures)

Six rights of merchandising and their importance
Merchandise planning, acquisition, handling and monitoring
Supply chain management, Inventory Control systems, Financial accounting

Unit-V. Future Trends in Buying and Merchandising (12 Lectures)

The changing impact of IT on fashion retailing, The impact of new manufacturing techniques
The fashion buyers of the future, The fashion merchandiser of the future
Future technologies impacts on the consumer, Other types of fashion retail competition

Recommended Readings:

1. Bliss, L. L. (1995) Study Guide Visual Merchandising and Display 3d ed. Fairchild Publications.
2. Blythe, J. (2006), Principles and Practice of Marketing, Thomson, London.
3. Easey M. (2009), Fashion Marketing, 3d ed. United Kingdom: Blackwell Publishing
4. Elaine, S. (2013) The Dynamics of Fashion. 4th ed. New York: Bloomsbury publication
5. Kotler, P and Gary, A. (2001) Principles of Marketing. 9th ed. Upper Saddle River, N.J.. Prentice Hall
6. Wolfe, M. (2009) Fashion Marketing & Merchandising, 3 ed. United States: Goodheart Willcox Publishing
7. https://www.slideshare.net/kotharivr/fashion-merchandising-ebook

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OR

RESEARCH COURSES- RC 1: (In lieu of AMJ 1)

RESEARCH PLANNING & TECHNIQUES

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	**Pass Marks: Th (SIE + ESE) = 40**

(Credits: Theory-04) **60 Hours**

(Only for Hons with Research Degree)

Course Outline

The course is designed to equip students with a comprehensive understanding of research principles, methodologies, and specific techniques applicable to various fields within Home Science.

Learning Objectives:

1. To equip the students with the ability to understand the philosophy and ethics of research.
2. Foster critical and analytical thinking aligned with NEP's emphasis on inquiry-based learning.
3. They could frame the questions in research and structure the hypothesis to find the gap in any research matter.

Learning Outcomes:

1. They will be able to identify and define research problem.
2. Able to conduct literature reviews using digital tools.
3. Form basic research questions and hypothesis.
4. Design research methodology, specific techniques, tests, experiments, case studies along with given protocols. Analyse and present results and findings. Able to present research proposals.

Course Content:

Unit I Importance of Structured Research Plan (10 Lectures)

- Clarity, focus, efficient use of resources, authentic and creditable finding in research
- Planning research – Stating Project Title and Background of existing knowledge

  Objectives and Research Questions- Clearly defined, Measurable, Achievable, Relevant, and Time-bound (SMART) goals and questions the study aims to answer.

  Methodology: A detailed description and justification of the research methods,- a qualitative, quantitative, or mixed-methods approach.

  Data Analysis Plan: Methods and tools for processing and interpreting the collected data.

  Timeline and Budget: A realistic schedule outlining key milestones and deadlines, along with a detailed cost breakdown and resource allocation.

  Ethical Considerations: Addressing potential ethical issues, obtaining informed consent, and ensuring data privacy and handling procedures are in place.

  Expected Outcomes and Deliverables: Plans for how the results will be presented (e.g., reports, presentations, publications) and the potential impact of the findings.

Unit II Key Techniques in the Research Process (10 Lectures)

The overall research process involves several sequential or overlapping steps:

Formulating the Research Problem: Stating the issue in general terms and then rephrasing it into a specific, testable problem statement or hypothesis.

Conducting a Literature Review: Examining existing research, academic papers, and industry reports to build a foundation of knowledge and identify gaps.

Developing a Research Design: Creating a framework that outlines how the research will be carried out, including the overall structure and approach.

Collecting Data: Gathering necessary information using chosen methods, carefully documenting the process to avoid bias and errors.

Analyzing Data: Applying appropriate techniques (e.g., statistical analysis for quantitative data, thematic analysis for qualitative data) to organize and interpret the data.

Drawing Conclusions: Interpreting the findings, answering the research question, discussing implications, and acknowledging the study's limitations.

Writing and Disseminating the Report: Sharing the findings through a formal report, presentation, or publication to contribute to the body of knowledge.

Unit III Common Research Methods/Techniques (10 Lectures)

- **Experiments**: Using scientific procedures to test a hypothesis under controlled conditions,
- **Surveys**: Collecting data through questionnaires to gather information from a large number of participants, useful for identifying trends and patterns.
- **Interviews and Focus Groups**: Engaging with individuals or small groups through guided discussions to gather in-depth, qualitative insights into experiences and motivations.

- **Observation**: Observing phenomena, events, or entities in their natural environment without intervention to understand behaviors and context.
- **Case Studies**: In-depth investigations of a particular individual, group, or event, often to expand contextual understanding rather than test a hypothesis.
- **Secondary Data Analysis**: Utilizing data that already exists from previous studies or reports, which can be cost and time-effective.
- **Usability Testing**: Observing participants as they interact with a product or system to evaluate its ease of use and uncover friction points.

Unit IV Techniques in Home Science **(06 Lectures)**

1. Foods and Nutrition Research

Nutrition Assessment Techniques (Human Studies)

- Dietary Intake Assessment:
  - 24-hour recall:
  - Food records/diaries:
  - Food Frequency Questionnaires (FFQs):
  - Diet History:
- Anthropometric Measurements:
- Biochemical and Biomarker Methods
- Clinical/Physical Examination:

Bioanalytical Techniques (Food Analysis)

- Chromatography, Spectroscopy, Mass Spectrometry (MS), 'Omics' Technologies:

2. Human Development Research **(06 Lectures)**

Developmental research primarily utilizes three main designs to study age-related changes:

- Cross-Sectional Designs
- Longitudinal Designs
- Sequential Designs
- Tests and scales for Cognitive/ Intelligence and Emotional / Behavioural Traits

3. Textiles and Clothing Research **(06 Lectures)**

Technical and Scientific Techniques - for textile material properties, production processes, and innovation.

- Textile Testing:
  - Physical Testing: tensile strength, tear strength, burst strength, and abrasion resistance, test for durability and performance.
  - Chemical Testing: chemical composition of textiles, fiber identification, test for application of finishes (flame retardant, water repellent), and harmful substances.
  - Comfort Assessment: Specialized tests, sweating guarded hot plate test and Qmax test to measure thermal resistance, breathability, and surface sensations.
- Experimental Design: experiments to optimize quality characteristics by manipulating variables (e.g., threads per inch, needle thickness) and use of statistical analysis like ANOVA and regression.
- Material Innovation: Researching and developing new materials and functions, such as nanotechnology applications for smart textiles (UV-resistant, conductive) or bio-fabricated fabrics from microorganisms.
- Process Improvement: Method study and time study to analyze existing operations, reduce waste, improve layout, and increase productivity and safety standards in manufacturing.

4. Design and Market Research Techniques

- Market Research: Gathering information about consumer needs and behaviour, market size, and competitor activities.
  - Primary Research: Involves collecting firsthand data through methods such as online surveys, phone or in-person interviews, and focus groups.
  - Secondary Research: Utilizes existing data from market and industry reports, government statistics, and fashion websites to inform decisions.
- Fashion Forecasting: Using data and AI to predict future trends in colour, style, and materials by analyzing runway shows, social media, and market data.

Recommended Readings

1. Kothari, C. R. – Research Methodology: Methods and Techniques
2. Online resources: SWAYAM, NPTEL, and Google Scholar
3. Kothari, C.R. and Garg, Gaurav, Research methodology: Methods and techniques, New age International
4. Breakwell, Glynis M. Hammond,S. Fifeschaw, C., Smith, J.A. Research Methods in Psychology, Sage Publication
5. Kerlinger, Fred N., Foundation of Behavioral Research, Hort, Rinehart and Winston publishing
6. Ahuja, Ram., Research Methods, Rawat Publications

SEMESTER VIII

I. MAJOR COURSE- MJ 19:
COMMUNITY DEVELOPMENT

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

Course Description

Community development refers to the broad set of skills and institutions that local communities utilize in an effort to improve the quality of life for all residents. This Course examines the history of housing, economic trends and social policies that have affected the marginalized communities across the country and projects the organizing and capacity building measures that community development professionals and activists have sought to improve these conditions.

Learning Objectives

1. Understand the conceptual meaning of community development and community organization
2. Become aware of community development approaches
3. Study community organization modalities in various settings
4. Learn to evaluate community development programmes

Learning Outcomes

1. Distinguish community development from community organization
2. Comprehend significant phases in community development
3. Gain knowledge on sustainability and community development concepts
4. Envisage the role of community-based organizations in community development

Course Content

Unit-I. Concept of Community Development **(12 Lectures)**

Meaning and Definition of community development
Principles, Philosophy and Objectives
Elements of community development -Community development as a process, community development as a method, community development as a programme, community development as a movement
Rural development initiatives before independence and post-independence

Unit-II. Role of Community Based Organizations **(12 Lectures)**

Conceptual meaning and definition of community-based organizations
Role, structure and functions of community organizations
Models of community-based organizations
Approaches of community-based organizations

Unit-III. Phases of Community Development **(12 Lectures)**

Phases of community development – definition and needs
Seven Phases of community development: sequence and exclusive roles
- Relationship
- Assessment
- Discussion
- Organization
- Reflection
- Modification
- Continuation

Personnel involved in community development activities – qualities and role
National Extension Service – Role of student volunteers in community development

Unit-IV. Evaluation of community development programmes **(12 Lectures)**

Review of community development programmes
Evaluation methods
Analysis /merits and demerits
Community involvement and assay of Benefits
Incentives and Prizes/ Awards

Unit-V. Sustainability and Community Development **(12 Lectures)**

Concept of sustainable community development
SDGs – Sustainable Development Goals – concept
Significance of SDGs to community development
Need for sustainable community development
Sustainability in community development- aims, objectives and principles

References

1. Banta Sharma Nidaugmayum (2015). Community organization and social registration. New Delhi: Janada Prakashan
2. Indra Godara (2013). Committee and community organization. New Delhi: Black Prints Publishing
3. Kunal Bhatia (2012). Social Work and Community Development. New Delhi: Sonali publications
4. Reddy A.S.A (2001). Extension Education. Bapatla: Sree Lakshmi Press
5. Thomas William, A.J. (2015). Rural Development Concept and Recent approaches. New Delhi, RAWAT Publications

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II. MAJOR COURSE- MJ 20:
PRACTICALS-VI

Marks: Pr (ESE: 6Hrs) =100	Pass Marks: Pr (ESE) = 40

(Credits: Practicals-04) **120 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

List of Practical

Community Development **60 hrs= 30 Classes**

Practical

1. Assessment of selected community development programmes
2. Visit to Award won Panchayats to understand their success story
3. Visit to villages to observe community activities
4. Prepare a document on community development activities in a model village
5. Preparation of plan of work
6. Organize community development programmes in a selected rural area
7. Follow up and evaluation of the programmes in progress

Recommended Readings:

1. Banta Sharma Nidaugmayum (2015). Community organization and social registration. New Delhi: Janadaprakashan
2. Indra Godara (2013). Committee and community organization. New Delhi : Black prints publishing
3. Kunal Bhatia (2012). Social Work and Community Development. New Delhi: Sonali publications
4. Reddy A.S.A (2001). Extension Education. Bapatla :Sree Lakshmi Press
5. Thomas William, A.J. (2015). Rural Development Concept and Recent approaches. New Delhi, RAWAT publications

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III. ADVANCED MAJOR COURSE- AMJ 2A: NUTRITION FOR HEALTH AND PHYSICAL FITNESS

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

(Only for Hons Degree)

Course Description

Integration and application of principles of sound nutrition and physical activities to optimize the physiological, psychological, and social lifelong development of the individual and use of scientific principles and current technological advances, helps to assess and evaluate physical fitness, body composition, dietary patterns, energy expenditure, and their interrelationships.

Learning Objectives:

1. Understand the Importance of Nutrition, Fitness and Health
2. Gain Knowledge on Exercise Physiology and Nutrition for Physical Activity
3. Comprehend the Technique and Gadgets for Physical Activity Training
4. Understand the Risks of Hypokinetic Diseases
5. Understand the principles of Exercise and Stress Management

Learning Outcomes:

1. Upon successful completion of the course students shall be able to:
2. Explain the principles of physical fitness and nutrition (such as body composition, energy intake, energy expenditure, and the acute and chronic physical changes related to exercise and nutrition) complement each other in helping to develop physiological well-being and overall health.
3. Explain the principles of fitness and nutrition (such as setting realistic short-term behavior change goals and the relationship of exercise and diet to stress reduction) complement each other in helping to develop psychological well-being and overall health.
4. Identify some of the social and cultural influences on food habits and exercise/activity patterns.
5. Evaluate current nutritional information with regard to its contribution to Health and physical fitness.

Course Content

Unit-I. Health and Fitness (10 Lectures)

Definition, Components and Relationship among Physical Fitness, Wellness and Health Personalized approach
Benefits of fitness training

Unit-II. Exercise Physiology and Nutrition for Physical Activity (16 Lectures)

Pulmonary, Cardiovascular Regulation and integration, Skeletal and neural control,
Endocrines and exercise Nutrition & Physical performance
Physical fitness: cardio respiratory fitness, muscular strength, muscular endurance, body composition and flexibility
Energy systems, muscles and physical performance-ATP-CP energy systems, Lactic Acid energy systems, Oxygen energy systems, Glycogen depletion
Endurance Training-Muscle and Muscle fibres
Optimal Nutrition and Energy needs for optimum performance e.g. athletes Exercise and fluid loss, Hydration, Nutrition supplements, Ergogenic Aids

Unit-III. Physical Activity Training (12 Lectures)

Aerobic and anaerobic training -To enhance Cardio Vascular Endurance,
Flexibility and Body Composition,
Measurement of PAL,
Benefits of Fitness training and Gadgets for measuring PA –Motorized Treadmill, (aerobic Fitness),
Functional Trainer,
Fluid Rower (Upper body), Elliptical Bicycle and Bicycle Ergometer (Lower body), 3.10 Stretch Trainer (Whole body),
Multi Gym (9, 12, 16 station) for different muscle groups

Unit-IV. Diseases due to Faulty/Poor Food Habits and Physical Inactivity (12 Lectures)

Life Style related diseases/disorders (Non communicable Disease conditions) - Meaning Causative Factors and Diet Modification/evidence-based guidelines for
Underweight, Obesity,
Diabetes mellitus, Hypertension, Cancer
Cardiovascular Disease, Anaemia

Unit-V. Exercise, Stress and Health Management (10 Lectures)

Stress Assessment and Management
Techniques-Exercise at medium and high altitudes, Underweight, Overweight and Obesity, Relaxation Techniques,
Yoga and Meditation for Health, Clinical Exercise
Physiology for Cancer,
CV and Pulmonary rehabilitation

Recommended Reading

1. Werner W. K Hoejer (1989), *Life time Physical Fitness and Wellness*, Morton Publishing Company, Colorado.
2. Mishra, S. C (2005) *Physiology in Sports*. Sports Publication, New Delhi
3. Greenberg, S. J and Pargman, D (1989) *Physical Fitness – A Wellness Approach Prentice* Hall International (UK) Limited, London
4. Swaminathan M. (2008) *Essentials of Food and Nutrition* Bangalore Printing Publishing Co. New Delhi
5. McArdle, W. D, Frank I. Katch, F. I and Victor L. Katch (1996) *Exercise Nutrition: Energy Nutrition and Human Performance*. William & Wilkin Publishing USA.
6. Mahan, K and Stump, E. S (1996) Krause *Food and Nutrition and Diet Therapy* W.B Saunders Company, USA.

OR ADVANCED MAJOR COURSE- AMJ 2B:

ADULTHOOD AND AGING

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

(Only for Hons Degree)

Course Description

The course introduces students to the concept of adult development and aging. It explains basic developmental transitions in adulthood and late adulthood or old age. Various facets of adult development across domains and developmental needs of the elderly are discussed Cultural and gender differences in the experiences of aging are included.

Learning Objectives

1. Understand the theoretical significance of adulthood in life span development with special reference to aging
2. Develop a culturally relevant understanding of issues and concerns of adulthood and aging 3. Sensitize students to transitions in adult life and preparation for old age from a gender perspective
3. Create awareness about policy provisions for adults and the elderly across various contexts (work, family, Retirement, health, welfare)
4. Prepare students for outreach activities with varied groups of adults and elderly

Learning Outcomes

1. Explain variations in the experiences of adulthood and old age across cultures and genders
2. Discuss factors that affect physical, cognitive and socio-emotional development during adulthood and old Age
3. Identify developmental needs of varied groups of adults and elderly across contexts
4. Execute developmental programs of intervention for varied groups of adults and elders

Course Content

Unit-1 Stages of Adult Development and the Process of Aging: A Theoretical Overview (10 Lectures)

Contemporary changes, increase in life expectancy and decrease in death rate Stages of Adulthood and Aging. Emerging adulthood (18-25), mature adulthood (25-45), middle age (45-55), late adulthood (55-65), old age (65 and above)

Characteristics and needs in different stages of adulthood

Theories of adult development and aging (Erikson's theory, Wisdom theories, Disengagement.

Activity, Ashrama Dharma framework)

Unit-II Development in Emerging and Early Adulthood (12 Lectures)

Definition, characteristics, developmental tasks

Physical Changes-Cardiovascular and Respiratory systems, Motor performance, Immune system Cognitive Development Changes in mental abilities Crystallized and fluid intelligence.

Information processing Speed, Attention, Memory. Problem solving and Creativity

Life transitions and adjustments during early adulthood: Exploring sexual orientations, stable romantic relationships, alternative life choices, marriage, family life, parenting and caregiving, social mobility

Cultural, gender and social class variations in the experience of adulthood and aging

Interpersonal relationships and responsibility challenges in different spheres of life (balancing work and family, socio-cultural responsibilities, health challenges, emotional stresses, financial security)

Unit-III Development in Middle and Late Adulthood (12 Lectures)

Definition, characteristics, developmental tasks,

Physical and cognitive changes, Changes in interests, Social, emotional, vocational changes, Relationships at midlife marriage and divorce, changing parent-child relationships, grandparenthood, siblings, friendships, relationship across generations- Middle aged children and their aging parents

Preparation for old age (From work to retirement, emotional, financial, social and familial transitions,)

Contextual variations in the experience of late adulthood and aging (rural-urban, socio-economic, employed-unemployed, organized-unorganized sector etc.)

Unit-IV Development in Old Age (14 Lectures)

The phenomenon of aging biological, psychological, sociological and functional age, optimal aging, normal aging, primary and secondary aging and successful aging

Gerontology-Definition, concept, importance and scope

Types – Social gerontology, Bio gerontology, Medical gerontology (Geriatric)

Theories of aging process Sociological, Psychological and Biological theories of aging.

Psychosocial development in old age,

Changing relationships in old age marriage and divorce, widowhood, never-married, childless older adults, siblings, friendships
Myths and realities of aging Adjustments – Physical and mental changes,
Vocational adjustments- adjustment to retirement, different living arrangements, familial roles and relationships
Dealing with stressful life events, divorce, terminal illness, death and bereavement Overview of Alzheimer, Dementia, Parkinson's disease Common abuses among elderly-physical, emotional, psychological, verbal and financial, reporting abuse, Adult Protective Services
Policy provisions for the elderly: Global and national

Unit-V Aging and Well-Being in the 21" Century (12 Lectures)

Demographic profile of elderly in the world and India
Living arrangements (intergenerational families, old age homes, institutions etc.) and new models of care giving
Overcoming mental health challenges (loneliness, depression, anxiety, dementia, other age-related diseases etc)
Life style changes and holistic health (physical well-being, food choices, yoga and restorative fitness, counseling and therapy, social and interpersonal support systems)
Technology and aging (use of internet, advances in health and medical treatment, gadgets supporting safety and security of elderly)
Leisure time activities and innovative models of developmental intervention

Recommended Readings:

1. Arnett, J. J., & Jensen, L. A. (2019). Human Development: A cultural approach (3led.). New York: Pearson.
2. Kakar, S. (Ed.). (1993). Identity and adulthood. New Delhi: Oxford University Press.
3. Lamb, S. E. (Ed.). (2012). Aging and the Indian diaspora: Cosmopolitan families in India and abroad. New Delhi: Orient Blackswan.
4. Rajan, I S., Risseeuv, C., &Perar, M. (Eds.). (2008). Institutional provisions and care for the aged perspectives from Asia and Europe. New Delhi: Anthem Press.
5. Reddy, P.A., Devi, U., &Harinath, N. (2010). Aging: The global phenomena issues and strategies. New Delhi: Sonali.
6. Sahoo, F M. (Ed.) (2009). Behavioral issues in aging Care, concern and commitment. New Delhi Concept Publishers.
7. Sahu, C. (1988). Problems of aging among Indian tribes. New Delhi: Sarup & Sons.
8. Shankardass, M.K. (Ed.) . (2020). Aging issues and responses in India. New Delhi: Springer
9. Soneja, S. (2001). Elder abuse in India. Report for the World Health Organization.
10. Srivastava, V (2010) Women and aging. New Delhi Rawat Publisher

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OR ADVANCED MAJOR COURSE- AMJ 2C:

APPAREL CONSTRUCTION

Marks: 25 (5 Attd. + 20 SIE: 1Hr) + 75 (ESE: 3Hrs) = 100	Pass Marks: Th (SIE + ESE) = 40

(Credits: Theory-04) **60 Hours**

(Only for Hons Degree)

Course Description

The course introduces the basic principles of apparel construction, including pattern and fabric selection. The course aims at developing skills in using knowledge of apparel construction required to be employed in the field of the apparel industry and entrepreneurship. It deals with the tools and techniques required for apparel construction. It covers the pattern making and grading techniques required for making apparel. It gives hands-on experience for apparel construction, which is the pre requisite of the apparel industry.

Learning Objectives:

1. Learns the requirements for apparel construction
2. Understand the use, significance and selection of tools and equipment for apparel construction
3. Understand the coordination of fabric, pattern and supportive material.
4. Enhance the understanding of drafting and pattern making.
5. Acquire skills of apparel construction
6. Understand the fit of the garment.

Learning Outcomes:

Successful completion of this course will enable students to

1. Know the requirements for apparel construction
2. Describe the use and significance of tools and equipment for apparel construction
3. Explain the drafting and pattern making method.
4. Explore the skills of apparel construction
5. Adapt the basic block to different designs.
6. Evaluate the fit of the garment

Course Content

Unit-I. Introduction to Apparel Construction **(12 Lectures)**

Elements of apparel construction
Grain, Seams, Finish, Workmanship Guides to sew fabrics
Threads, needles, seams and their co-relation to fabrics. Uses of essential tools and supplies
Sewing Needles, hand sewing tools, marking tools, measuring tools, cutting tools, pressing tools, threads, special tools, trims & tapes, buttons & closures.

Unit-II. Basics of Apparel Construction **(12 Lectures)**

Body measurements (BM): Principles of taking BM, Taking accurate body measurements
Measuring from a garment. Size charts. Standard size charts for Kids, Men and Women
Ease allowance for various fits.
Comparison of standard size charts from different countries and brands
Fabric Requirement: Calculation of fabric needed for various garments.
Optimising the fabric requirement
Principles and methods of grading and sizing

Unit-III. Pattern Making **(12 Lectures)**

Introduction to pattern making
Pattern making tools
Pattern making techniques: Drafting, Draping and Flat pattern technique
Darts and their manipulation, added fullness and contouring.
Principles of pattern making for: Upper garment, Lower garment, Sleeves, Collar, Dresses

Unit-IV. Fabric Layout, Cutting and Marking **(12 Lectures)**

Fabric preparation
Laying out checks, plaids & directional fabrics,
Marking with chalk, pencil or liquid markers
Cutting and sewing tips

Unit-V. Selection of Fabric and Accessories **(12 Lectures)**

Fabrics: Easy to stitch, special fabrics, textured and patterned fabrics. Selection of appropriate fabrics for apparel.
Accessories and trimmings: types and use
Appropriate combination of accessories, trims and materials

Recommended Readings:

1. Aldrich, W. (1988). Metric Pattern Cutting. Unwin Hyman Ltd., London.
2. Amaden, C.& Crawford (1995) Fashion Your Own Skirts the Simple way Amaden-Crawford Associates, USA.
3. Armstrong, H. (2012). Patternmaking for Fashion Design Pearson Education, Inc, New Delhi.
4. Bray N., (1986) Dress Pattern Designing: The Basic Principles of cut and fit, Blackwell Publishing.
5. Hollen, N.R. &Kundel, C.J. (1993). Pattern Making by the Flat-Pattern Method. Prentice Hall, New Jersey.
6. Kopp, E., Rolfo, V. & Zelin, B. (1995). Designing Apparel through the Flat Pattern. Fairchild Publications New York.
7. Singer. (1989). Sewing Pants that Fit. Cowles Creative Publishing Inc. Minnesota, USA
8. Thomas, A. J. (1993). Art of Sewing. UBS Publishers Distributions Ltd. New Delhi
9. Zarapkar, K.R. (2008). Zarapkar System of Cutting. Navneet Publication (India) Ltd., Mumbai.

IV. ADVANCED MAJOR COURSE- AMJ 3:
PRACTICALS-VII (ADVANCED HOME SCIENCE)

Marks: Pr (ESE: 6Hrs) =100	**Pass Marks: Pr (ESE) = 40**

(Credits: Practicals-04) **120 Hours**

(Only for Hons Degree)

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 60 marks
Practical record notebook = 15 marks
Viva-voce = 25 marks

Practicals:

Part- A **120 hrs=60 Classes**

1. Aerobic and Anaerobic Exercises
2. Relaxation Techniques,
3. Stress Assessment and Management
4. Yoga and Meditation
5. Visit to Fitness Centre: Observational report and 2 Case studies
6. Desk review of ergogenic aids available in the market
7. Use of non-invasive equipment's like Pedometer, pulse oximeter, step test, Omrans body composition analyser, home monitoring BP equipment to assess the nutritional status

OR

Part- B **120 hrs=60 Classes**

1. Preparation of an album on developmental transitions, individual and family life transitions during adult life.
2. Visit to old age home or specialized living arrangements for elderly.
3. Visit to leisure facilities for elderly like laughing clubs, recreational clubs
4. Visiting your parents' workplace to understand their roles and responsibilities.
5. Documenting your mother's and grandmother's life aspirations and experiences before and after marriage.
6. Preparing a list of specialized services for the elderly in the city and / or preparing an elderly support kit (support with amenities, important phone numbers, medicines, reminders etc.)
7. Planning a hands-on workshop session for teaching internet and smart phone use to the elderly
8. Interviewing elderly couples about their relationship, life challenges and satisfactions
9. Planning a panel discussion or awareness session on welfare policies and policy recommendations for older persons in India
10. Discussing intergenerational relationships of emerging/young adults and parents as portrayed in cinema, advertisements and social media

OR

Part -C **120 hrs=60 Classes**

1. Development of basic block
   a) Upper and
   b) Lower
2. Drafting and construction of different types of
   a) Collars
   b) Plackets and
   c) Sleeves
3. Drafting and construction of
   a) Salwar
   b) Churidar
   c) Pant
4. Adaptation of basic block for designing of
   a) Frock
   b) Kurta
   c) Blouse
   d) Shirt
5. Construction of above designed patterns.
   a) Maintaining of journal with the details of the practical work in writing and supported with samples.

Recommended Readings:

1. Srilakshmi, B. *Dietetics, New* Age International P. Ltd., New Delhi, 2018.
2. *Dietary Guidelines of Indians* – A Manual, National Institute of Nutrition, Hyderabad, 2015.
3. Greenberg, S. J and Pargman, D (1989) *Physical Fitness – A Wellness Approach Prentice* Hall International (UK) Limited, London
4. Swaminathan M. (2008) *Essentials of Food and Nutrition* Bangalore Printing Publishing Co. New Delhi
5. McArdle, W. D, Frank I. Katch, F. I and Victor L. Katch (1996) *Exercise Nutrition: Energy Nutrition and Human Performance*. William & Wilkin Publishing USA.
6. Saraswathi, T.S., Menon, S., & Madan, A. (eds.) (2018) Childhoods in India Traditions, Trends and Transformations. New Delhi. Routledge.
7. Sinha, D., & Misra, R.C. (1999). Socialization and cognitive functioning. In T.S. Saraswathi (Ed.), Culture, socialization and human development: Theory, research and applications in India (pp.167-187). New Delhi: Sage.
8. Sahoo, F. M. (Ed.). (2009). Behavioral issues in ageing: Care, concern and commitment. New Delhi: Concept Publishers.
9. Tanner, D., & Harris, J (2007). Working with the older people. New York: Routlege publishers.
10. Armstrong, H. (2012). Patternmaking for Fashion Design Pearson Education, Inc, New Delhi.
11. Hollen, N.R. &Kundel, C.J. (1993). Pattern Making by the Flat-Pattern Method. Prentice Hall, New Jersey.
12. Singer. (1989). Sewing Pants that Fit. Cowles Creative Publishing Inc. Minnesota, USA
13. Thomas, A. J. (1993). Art of Sewing. UBS Publishers Distributions Ltd. New Delhi
14. Zarapkar, K.R. (2008). Zarapkar System of Cutting. Navneet Publication (India) Ltd., Mumbai.

OR RESEARCH COURSES- RC 2: (In lieu of AMJ 2 & AMJ 3)

RESEARCH/ PROJECT DISSERTATION/ RESEARCH INTERNSHIP/ FIELD WORK

Marks: 50 (SIE: 25 Synopsis + 25 Viva on Synopsis: 1Hr) + 100 (ESE Pr: 6Hrs) + 50 (Viva) = 200	**Pass Marks = 80**

(Only for Hons with Research Degree)

Guidelines to Examiners for Semester Internal Examination (SIE):

Evaluation of project dissertation work may be as per the following guidelines:

Project Synopsis = 25 marks

Project Synopsis presentation and viva-voce = 25 marks

Guidelines to Examiners for End Semester Examination (ESE):

Evaluation of project dissertation work may be as per the following guidelines:

Project model (if any) and the Project record notebook = 100 marks

Project presentation and viva-voce = 50 marks

The overall project dissertation may be evaluated under the following heads:

- *Motivation for the choice of topic*
- *Project dissertation design*
- *Methodology and Content depth*
- *Results and Discussion*
- *Future Scope & References*
- *Participation in an Internship programme with a reputed organization*
- *Application of the Research technique in Data collection*
- *Report Presentation*
- *Presentation style & Viva-voce*

Research Project

Research project under a Supervisor of the Department/Institution may be allocated to the eligible and qualifying candidate. Select a Research problem in specific area of specialization with objectives, hypothesis, methodology, collection of data, tabulation and classification of data, result and interpretation, report writing.

Project Dissertation/ Research Internship/ Field Work

The students of Graduation must work Thirty-Six (36) days as Interns under Any Organisation having an MoU with the Ranchi University, which may include Government Organizations/judiciary/ Health Care Sectors/ Educational Institutions/ NGOs/ Apparel Industry/ Boutique / Testing Institute etc.

The candidates must have to prepare Case Report, based on quantitative or qualitative data of their Internship period:

1. Selection of Research Topic.
2. Review or Survey of the related Literatures.
3. Formation of Research Problem; research questions, objectives and hypotheses.
4. Formation of Research Design, Selection of tools for data collection and description of Sample.
5. Pilot Research or Study.
6. Revision of Research Proposal.
7. Collection of data.
8. Coding and analysis of data.
9. Conclusions and their Interpretations
10. Preparation of Research Report.

- The nature and the place of working must be informed in writing, seeking permission from the head of the department or the institution before undertaking the Project dissertation.

Submission of the Project Work

Each student has to submit two copies of the dissertation work duly forwarded by the HOD of the Department concerned. The forwarded copies will be submitted to the Department/Institution for evaluation at least seven days before the seminar.

The Project Report will consist of:

a. Field work/Lab work related to the project.
b. Preparation of the dissertation based on the work undertaken.
c. Presentation of project work in the seminar on the assigned topic & open viva there on.
d. At least one Research paper must be presented at a conference or may be published in a reputed journal.

Topics

Project work related to the Industrial/socially relevant topics may be given.

NB: Students will select topics for the project work in consultation with a teacher of the department.

The seminar will be held in the respective University Department at Ranchi University, Ranchi.

COURSES OF STUDY FOR FYUGP IN **"HOME SCIENCE" MINOR**

ASSOCIATED CORE COURSE- MN A **Either may be opted in Sem-I or Sem-II**

I. ASSOCIATED CORE COURSE- MN A: INTRODUCTORY HOME SCIENCE

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	**Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40**

(Credits: Theory-03) **45 Hours**

Course Description

This course will give a basic understanding of overall domain of Hone Science as a discipline. It will deal with the basic knowledge of all the five branches or area of specialisation under the subject Home Science as an applied science

Learning Objectives

1. To make students enable to understand the domains if Home Science as a Subject
2. To make students aware of basics of Nutrition for a healthy life.
3. To make an understanding of Life and Human Development
4. To develop understanding of resources their best utilisation, textiles and their uses, Home Science extension education system for better community outreach programme

Learning Outcome

On successful completion of course

1. Students will develop a basic understanding of Home Science as Subjects.
2. Students will develop knowledge and understanding about health & nutrition, Human Development and its need, textiles & their uses, family resources and extension education system in order to achieve the aimed SDC by 2030.

Course Content

Unit I- Foods and Nutrition **(9 Lectures)**

Basic understanding of Foods, Nutrition, Health and its relationship, terminologies
Function of Food, Food Groups as source of various nutrients.
Macro and micronutrients, water
Principles of meal planning, RDA
A brief knowledge of nutrition during infancy, childhood, adolescence, adulthood, old age and special condition (pregnancy, lactation, calamities, disaster

Unit II- Human Development **(9 Lectures)**

Definition, Introduction and importance of Human Development
Pre-natal development, birth and neonates, stages and factors affecting pre-natal development
Various developments during Infancy, Childhood, Adolescence, Adulthood, old age, (Physical, Mental, Social, Emotional)

Unit III- Family Resource Management **(9 Lectures)**

Concept, Universality, and Scope of management, approaches to management
Family as resource, Meaning, classification and characteristics of resources, factor affecting utilisation of resources, maximising use of resources and resource conservation
Family as resource, availability and management of resources by an individual/family- money, time, energy, space.
Event planning and execution.

Unit IV- Textiles and Clothing **(9 Lectures)**

Textile fibers, its properties, classification, a brief comparative study of production, properties, uses of major natural (cotton, wool, silk, linen, jute) and manmade fiber (Nylon, Polyester, acrylic)
Basic concept of yarn and fabric manufacturing process
Reason of wearing clothes, factors affecting selection of cloth/ apparel
Stain removal of major stains

Unit V- Home Science Extension Education **(9 Lectures)**

Definition, concept, nature, philosophy and principles of Home science extension education
Methods and media of community outreach; Audio visual aids- concept, classification, characteristics and scope
Relationship between communication, extension and development.

Recommended Readings:

1. Srilakshmi (2007). Food Science, 4th Edition. New Age International Ltd.

2. Wardlaw and Insel MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition. Mosby.
3. Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, New Delhi. 2015
4. Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw- Hill.
5. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.
6. Patri and Patri (2002); Essentials of Communication. Greenspan Publications
7. Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Pub. Pvt. Ltd.
8. Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co.
9. Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi

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II. ASSOCIATED CORE COURSE- MN A PR: ASSOCIATED CORE PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks
Practical record notebook = 05 marks
Viva-voce = 05 marks

Practicals:

1. Cultural practices related to pregnancy and infancy
2. Methods of study children- interview, observation, narratives
3. Planning and preparation of diet for infant, children, pregnant and lactating women
4. Planning and executing Birthday party/ fresher's party
5. Stain removal- Haldi, Curry, nailpolish, ball point ink, paint/warnish/ polish
6. Preparation of chart and poster to educate Mothers for caring their new born babies

Recommended Readings:

1. Srilakshmi (2007). Food Science, 4th Edition. New Age International Ltd.
2. Wardlaw and Insel MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition. Mosby.
3. Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, New Delhi. 2015
4. Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw- Hill.
5. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.
6. Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.
7. Patri and Patri (2002); Essentials of Communication. Greenspan Publications
8. Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Publishers Pvt. Ltd.
9. Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co., US.
10. Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi

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MINOR COURSE-B

I. MINOR COURSE- MN-B:
NUTRITION: A LIFESPAN APPROACH

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	**Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40**

(Credits: Theory-03) **45 Hours**

Course Description
The course deals with basic understanding of nutritional requirements of various age groups. In order to meet the nutritional requirement, it also gives concept of balanced diet, meal planning, recommended nutritional requirements, nutritional assessment etc.

Learning Objective
1. To develop an understanding of importance of Nutrition and nutritional requirement through every phases of life
2. To learn the basics of meal planning to ensure the complete nutrition,

Learning Outcome
1. On successful completion of course students will be able to identify the nutritional need of any age group
2. Will be able to plan, prescribe the proper diet to meet the RDA of any age group or category of community
3. Will develop an understanding of meeting the nutritional need by alternative food group or sources.

Course Content

Unit I: Principles of Meal Planning (10 Lectures)
Balanced diet
Food groups
Food exchange list
Factors effecting meal planning and food related behaviour.
Dietary guidelines for Indians and food pyramid

Unit II: Nutrient Requirements (8 Lectures)
Concept of Dietary Reference Intakes
Overview of methods for assessment of nutrient needs

Unit III: Nutrition for Adulthood and Old Age (12 Lectures)
Adult: Nutrient requirements for adult man and woman, RDA, nutritional guidelines, nutritional concerns, diet and lifestyle related diseases and their prevention
Elderly – Physiological changes in elderly, RDA, nutritional guidelines, nutritional and health concerns in old age and their management, factors contributing to longevity

Unit IV: Nutrition During Pregnancy and Lactation (12 Lectures)
Pregnancy – Physiological changes in pregnancy, RDA, nutritional guidelines, nutritional needs, effect of nutritional status on pregnancy outcome, optimal weight gain and its components, nutrition related problems in pregnancy and ways to control them.

Lactation – Physiology of lactation, RDA and nutritional needs of a nursing mother, nutritional guidelines

Unit V: Nutrition During Childhood (18 Lectures)
Growth and development, growth reference/ standards, RDA, nutritional guidelines, nutritional concerns and healthy food choices - Infants - Preschool children - School children - Adolescents

Recommended Readings:

1. Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House Pvt. Ltd.
2. Wardlaw GM, Hampi JS, DiSilvestro RA (2004). Perspectives in Nutrition, 6th edition. McGraw Hill.
3. ICMR (2011) Dietary Guidelines for Indians. Published by National Institute of Nutrition, Hyderabad.
4. ICMR (2010) Recommended Dietary Allowances for Indians. Published by National Institute of Nutrition, Hyderabad. 105
5. Chadha R and Mathur P eds. (2015) Nutrition: A Lifecycle Approach. Orient Blackswan. New Delhi.
6. Seth V and Singh K (2006). Diet Planning through the Life Cycle: Part 1 Normal Nutrition. A Practical Manual. Elite Publishing House Pvt. Ltd. New Delhi.
7. Gopalan C, Rama Sastri BV, Balasubramanian SC (1989) Nutritive Value of Indian Foods. National Institute of Nutrition, ICMR, Hyderabad.

II. MINOR COURSE- MN-B PR:
HOME SCIENCE MINOR-B PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks
Practical record notebook = 05 marks
Viva-voce = 05 marks

Practicals:

1. **Introduction to Meal Planning**
    1. Use of food exchange list
2. **Planning and Preparation of Diets and Dishes for**
    1. Young adult
    2. Pregnant and Lactating woman
    3. Preschool child
    4. School age child and adolescents
    5. Elderly
3. **Planning Complementary Foods for Infants and Toddlers**

Recommended Readings:

1. Khanna K, Gupta S, Seth R, Passi SJ, Mahna R, Puri S (2013). Textbook of Nutrition and Dietetics. Phoenix Publishing House Pvt. Ltd.
2. Wardlaw GM, Hampi JS, DiSilvestro RA (2004). Perspectives in Nutrition, 6th edition. McGraw Hill.
3. ICMR (2011) Dietary Guidelines for Indians.Published by National Institute of Nutrition, Hyderabad.
4. ICMR (2010) Recommended Dietary Allowances for Indians. Published by National Institute of Nutrition, Hyderabad. 105
5. Chadha R and Mathur P eds.(2015) Nutrition: A Lifecycle Approach. Orient Blackswan. New Delhi.
6. Seth V and Singh K (2006). Diet Planning through the Life Cycle: Part 1 Normal Nutrition. A Practical Manual. Elite Publishing House Pvt. Ltd. New Delhi.
7. Gopalan C, Rama Sastri BV, Balasubramanian SC (1989) Nutritive Value of Indian Foods. National Institute of Nutrition, ICMR, Hyderabad.

MINOR COURSE-C

I. MINOR COURSE- MN C:
BEHAVIOUR CHANGE COMMUNICATION

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	**Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40**

(Credits: Theory-03) **45 Hours**

Course Description

Overall, this course develops students' ability to apply communication principles strategically to promote positive behavioural change in the domains of health, environment, and social development. This also provides a comprehensive understanding of **Behaviour Change Communication (BCC)** as a strategic approach to influencing positive behaviours in individuals, communities, and societies. It explores the foundational concepts, theories, and models that guide behaviour change and highlights the importance of communication in addressing social, health, and environmental challenges.

Learning Objectives

1. To make students understand the basic concepts and approach of behavioural change communication
2. To make students understand the importance and need of BCC for health and to make the environment sustainable

Learning Outcome

1. Students will have good knowledge about concepts and approaches of behavioural change communication
2. Students will be able to know and change their behaviours to attain good health and a sustainable environment.

Course Content

Unit I: Concept and approaches to behaviour change communication (BCC) (20 Lectures)

- Concept and relevance of BCC
- Approaches to BCC
- BCC- Strategy design and implementation.
- Appraisal of communication action plan

Unit II: Behaviour change communication (BCC) for Health (20 Lectures)

- Health scenario and public health issues
- Health programmes and strategies
- Role of media in health promotion
- Analysis of health campaign

Unit III: Behaviour change communication (BCC) for Environment (20 Lectures)

- Environmental scenario and ecological issues
- Environment Programme and Strategies
- Role of media in promoting a sustainable environment
- Analysis of environmental campaign

Recommended Readings:

1. Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International
2. Atkin, C.K.& Rice, R.E. (2012). Theory and Principles of Public Campaigns. In C. Atkins & R Rice (EDS) Public Communication Campaigns. Newbury Park, CA: Sage
3. Cox, R. (2006) Environmental Communications and the Public Sphere. Thousand Oaks, CA: Sage.
4. Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International

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II. MINOR COURSE- MN C PR:
HOME SCIENCE MINOR-C PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instructions to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks
Practical record notebook = 05 marks
Viva-voce = 05 marks

Practicals:

1. To learn the process of analysing of BCC campaigns
2. To document and analysis BCC campaigns for social mobilization and policy change.
3. To design and implement BCC campaigns in core issues for stakeholders

Recommended Readings:

1. Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International
2. Atkin, C.K.& Rice, R.E. (2012). Theory and Principles of Public Campaigns. In C. Atkins & R Rice (EDS) Public Communication Campaigns. Newbury Park, CA: Sage
3. Cox, R. (2006) Environmental Communications and the Public Sphere. Thousand Oaks, CA: Sage.
4. Subedi, N R, (2008). Advocacy Strategies and Approaches: A Training of Trainers Manual. International

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MINOR COURSE-D

I. MINOR COURSE- MN D:
RESOURCE MANAGEMENT

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	**Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40**

(Credits: Theory-03) **45 Hours**

Course Description
Course explores the concept, universality, scope of management and explains about various types of resources—such as money, time, energy, and space, factors influencing their effective utilization. The course explains systematic planning, decision-making, supervision, and evaluation together with application of the management process to practical contexts of event planning and execution.

Learning Objectives
Students will be able to:
1. Understand fundamental concepts of management, classification and characteristics of various resources and develop strategies for maximizing and conserving resources by applying the management process—
2. Evaluate the management of specific resources by implementing systematic management techniques Learning Outcomes

Learning outcome
Upon successful completion of the course, students will be able to:
1. Demonstrate a clear understanding of management principles and apply various managerial approaches in real-life situations.
2. Identify and classify resources and effectively analyse how they can be utilized, conserved, and optimized.
3. Manage key personal and family resources
4. Apply the full management process, show awareness of ethical considerations and Evaluate outcomes of management decisions and make necessary improvements for better resource utilization.

Course Content:

Unit I: Introduction to Resource Management **(15 Lectures)**

- Concept, universality and scope of management
- Approaches to management
- Ethics in management
- Motivation Theory

Unit II: Resources **(15 Lectures)**

Understanding meaning, classification and characteristics of resources, factors affecting utilization of resources.

- Maximizing use of resources and resource conservation.
- Availability and management of specific resources by an individual/ family
  - Money
  - Time
  - Energy
  - Space
- Application of Management Process in:
  - Event Planning & Execution

Unit III: Functions of Management: An overview **(15 Lectures)**

Decision Making

- Planning
- Supervising
- Controlling
- Organizing
- Evaluation

Recommended Readings

1. Koontz, H. and O'Donnell, C., 2005, Management – A systems and contingency analysis of managerial functions. New York: McGraw-Hill Book Company
2. Kreitner. 2009, Management Theory and Applications, Cengage Learning: India
3. Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Publishers Pvt. Ltd.

II. MINOR COURSE- MN D PR:
HOME SCIENCE MINOR-D PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instructions to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks
Practical record notebook = 05 marks
Viva-voce = 05 marks

Practicals: **30 Hrs=15 Classes**

1. Resource conservation and optimization/green technologies (natural resources): Portfolio
2. Identification and development of self as a resource.
   - SWOT analysis-who am I and Micro lab
   - Building Decision Making abilities through management games
3. Preparation of time plans for self and family
4. Time and Motion Study
5. Event planning, management and evaluation-with reference to
   - Managerial process
   - Resource optimization - time, money, products, space, human capital

Recommended Readings:

1. Krentier, 2009, Management Theory and Applications, Cengage Learning; India
2. Rao V.S. and Narayana P.S., Principles and Practices of Management, 2007, Konark Publishers Pvt. Ltd.

MINOR COURSE-E

I. MINOR COURSE- MN E:
INTRODUCTION TO TEXTILE

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40

(Credits: Theory-03) **45 Hours**

Course Description
The course deals with basic concepts of classification of textile fibers and all the processes and methods involves in transforming them into various types of textile products.

Learning Objectives
Aim of this course is to develop basic understanding of textile fibers, yarn, fabrics, and the processes involves in their processing

Learning Outcomes
After completion of this course students will know about

1. Types of textile fibers, their production properties and uses
2. Yarn formation process, types, characteristics, differences and uses
3. Various types of fabric manufacturing processes
4. Wet processing of textile products

Course Content

Unit I: Introduction to textile fibers **(05 Lectures)**

- Morphology of textile fibers
- Primary and secondary properties
- Fiber classification

Unit II: Production, chemistry, properties and usage of fibers **(10 Lectures)**

- Natural fiber: Cotton, Flax, Silk and Wool
- Man-made fibers: Rayon, Polyamides, Polyester, Acrylic, Olefins (Polyethylene and Polypropylene) and elastomeric fibers

Unit III: Production and properties of Yarns **(10 Lectures)**

- Yarn construction:
  Mechanical Spinning (Cotton system, Wool system, Worsted system) Chemical Spinning (Wet, Dry, Melt)
- Types of yarns: Staple and Filament, Simple yarns, Complex yarns
- Yarn Properties-Yarn Numbering, Yarn Twist
- Textured yarns: Types and properties
- Difference between Threads and Yarns
- Blends: Types of blends and purpose of blending

Unit IV: Techniques of fabric construction **(10 Lectures)**

- **Weaving**
  Parts of a loom

Operations and motions of the loom

- Classification of weaves- construction, characteristics, usage
- **Knitting**
  Classification of knits
  Construction and properties of warp and weft knits
- **Non-wovens**
  Types, Construction Properties and usage

Unit V: Basics of Wet Processing **(10 Lectures)**

- Classification and uses of finishes
- Fundamentals of dyeing and printing

Recommended Readings:

1. Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co., US.
2. Joseph, M.L., (1988) Essentials of Textiles (6th Edition), Holt, Rinehart and Winston Inc., Florida.
3. Vilensky G., (1983) Textile Science, CBS Publishers and Distributors, Delhi.
4. Tortora, G. Phyllis, Understanding Textiles, McMillan Co. USA.
5. Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi
6. Miles L.W.C.(1994), Textile Printing, 2nd edition, England, Society of Dyers and Colourists
7. Shenai, V.A. (1987) Chemistry of Dyes and principles of Dyeing, Vol II, Bombay, India, Sevak Publications.

II. MINOR COURSE- MN E PR:
HOME SCIENCE MINOR-E PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instructions to Question Setter for
End Semester Examination (ESE):
There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment	*= 15 marks*
Practical record notebook	*= 05 marks*
Viva-voce	*= 05 marks*

Practicals: **30 Hrs=15 Classes**

1. Fiber Identification tests –Visual, burning, microscopic and chemical **4 hrs= 2 Classes**
2. Yarn Identification – Single, ply, cord, textured, elastic, monofilament, **4 hrs= 2 Classes**
   a. multifilament and spun yarn
3. Thread count and balance **4 hrs= 2 Classes**
4. Dimensional stability **2 hrs= 1 Class**
5. Weaves- Identification and their design interpretation on graph **6 hrs= 3 Classes**
6. Fabric analysis of light, medium & heavy weight fabrics (five each) **4 hrs= 2 Classes**
   a. Fibre type
   b. Yarn type
   c. Weave
   d. GSM
   e. End use
   f. Trade name
7. Tie and Dye **6 hrs= 3 Classes**

Recommended Readings:

1. Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co., US.
2. Joseph, M.L., (1988) Essentials of Textiles (6th Edition), Holt, Rinehart and Winston Inc., Florida.
3. Vilensky G., (1983) Textile Science, CBS Publishers and Distributors, Delhi.
4. Tortora, G. Phyllis, Understanding Textiles, McMillan Co. USA.
5. Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi

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MINOR COURSE-F

I. MINOR COURSE- MN F:
CURRENT CONCERNS IN PUBLIC HEALTH NUTRITION

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	**Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40**

(Credits: Theory-03) **45 Hours**

Course description

The focus of this course is to identify health and nutrition problems and integrating nutritional services with medical and social services within the community. This course will also provide basic knowledge and skills relevant to the practice of community nutrition, the role of nutrition in health promotion and perspectives for resolving community nutrition problems, Needs for assessment issues and national and state community nutrition programs, determinants of health outcomes, measurement of nutrition and health status, food and nutrition policy, legislative issues and management of community programs.

Learning objectives:

1. To know the basics of public health nutrition. To understand the need of prioritizing nutrition issues
2. To assess the nutritional and Health Status of an individual and the community.
3. To learn nutritional programmes and policies to overcome malnutrition
4. To understand various national and International nutritional organizations for combating malnutrition
5. To apply ICT in the formulation of community nutrition education programme

Learning outcomes:

1. The concepts and knowledge required for the delivery of community nutrition services will be applied to program planning, intervention and program evaluation. Gaining knowledge on nutritional programmes and policies overcoming malnutrition
2. Understanding the national, international and voluntary nutritional organizations to combat malnutrition
3. Able to organize community nutrition education programme with the application of computers.
4. Apply immunological intervention programmes to overcome epidemic of communicable diseases.

Course Content

Unit I: Nutritional Problems Affecting the Community (20 Lectures)

Aetiology, prevalence, clinical features and preventive strategies of-
Undernutrition - Protein energy malnutrition: Severe Acute Malnutrition and Moderate Acute Malnutrition, Nutritional Anaemias, Vitamin A Deficiency, Iodine Deficiency Disorders
Over nutrition – obesity, coronary heart disease, diabetes, Fluorosis

Unit II: Strategies for Improving Nutrition and Health Status of the Community (5 Lectures)

Appropriate interventions involving different sectors such as Food, Health and Education

Unit III: Nutrition Policy and Programmes (25 Lectures)

National Nutrition Policy
Integrated Child Development Services (ICDS) Scheme, Mid-day Meal Programme (MDMP), National programmes for prevention of Anaemia, Vitamin A deficiency, Iodine Deficiency Disorders Unit

Unit IV: Food and Nutrition Security (10 Lectures)

Concept, components, determinants and approaches
Overview of Public Sector programmes for improving food and nutrition security

Recommended Readings:

1. Wadhwa A and Sharma S (2003). Nutrition in the Community-A Textbook. Elite Publishing House Pvt. Ltd. New Delhi.
2. Park K (2011). Park's Textbook of Preventive and Social Medicine, 21st Edition. M/s Banarasidas Bhanot Publishers, Jabalpur, India.
3. Bamji MS, Krishnaswamy K and Brahmam GNV (Eds) (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi.
4. Gibney MJ (2005). Public Health Nutrition.
5. Vir S. (2011) Public Health Nutrition in developing countries. Vol 1 and 2
6. ICMR (1989) Nutritive Value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
7. ICMR (2011) Dietary Guidelines for Indians – A Manual. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
8. Bamji MS, Krishnaswamy K and Brahmam GNV (Eds) (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi

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II. MINOR COURSE- MN F PR:
HOME SCIENCE MINOR-F PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of the Practical Examination may be as per the following guidelines:

Experiment	*= 15 marks*
Practical record notebook	*= 05 marks*
Viva-voce	*= 05 marks*

Practicals: **30 Hrs=15 Class**

1. Planning and evaluation of low cost nutritious recipes for preschoolers, school age children, adolescents, pregnant and nursing mothers.
2. Planning and evaluation of low calorie nutritious recipes for weight management.
3. Planning and conducting a food demonstration.
4. Visit to an ongoing nutrition programme.

Recommended Readings:

1. Wadhwa A and Sharma S (2003). Nutrition in the Community-A Textbook. Elite Publishing House Pvt. Ltd. New Delhi.
2. Park K (2011). Park's Textbook of Preventive and Social Medicine, 21st Edition. M/s Banarasidas Bhanot Publishers, Jabalpur, India.
3. Bamji MS, Krishnaswamy K and Brahmam GNV (Eds) (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi.
4. Gibney MJ (2005). Public Health Nutrition.
5. Vir S. (2011) Public Health Nutrition in developing countries. Vol 1 and 2
6. ICMR (1989) Nutritive Value of Indian Foods. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
7. ICMR (2011) Dietary Guidelines for Indians – A Manual. National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
8. Bamji MS, Krishnaswamy K and Brahmam GNV (Eds) (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd. New Delhi

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MINOR COURSE-G

I. MINOR COURSE- MN G:
CARE AND WELL BEING IN HUMAN DEVELOPMENT

Marks: 15 (15 SIE: 1Hr) + 60 (ESE: 3Hrs) = 75	**Pass Marks: Th (SIE + ESE) + Pr (ESE) = 40**

(Credits: Theory-03) **45 Hours**

Course Description

Course deals with basic concept of Human development, factors affecting development and its relation with wellbeing. It also aims to develop understanding about programs and policies for promoting human development.

Course Objective

1. To develop basic understanding and knowledge of Human development and factor affecting it
2. To enable to have idea and knowledge of policies and programs related to Human development

Course Outcome

1. On completion of this course students will be well acquainted with knowledge for uplifting general population through better understanding of knowledge of human development

Unit I: Care and Human Development **(10 Lectures)**

- Definition, concepts & relevance of care
- Vulnerable periods in life that require care
- Principles & components of care

Unit II: Well-being and Human Development **(10 Lectures)**

Concept of well-being-- physical, psychological, spiritual

- Life crises and well-being
- Factors & experiences that promote well-being

Unit III: Care & well-being at different stages of life **(10 Lectures)**

- Childhood years
- Adolescence
- Adulthood and old age
- Well-being of caregivers

Unit IV: Policies, Services & Programs **(15 Lectures)**

School health programs

- Nutrition & health for all
- Counselling & yoga

Recommended Readings:

1. IGNOU. (2011). Positive psychology-2, MCFT-006 Applied social Psychology. New Delhi: IGNOU.
2. Santrock, J.W. (2007). Life Span Development (3rd ed.). New Delhi: Tata McGraw-Hill.
3. Seligman, M.E.P. (2002). Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment. New York: Free Press.
4. Sriram, R. (2004). Ensuring infant and maternal health in India. In J. Pattnaik (Ed.). Childhood in South Asia: A critical look at issues, policies and programs. Conn.USA: Information Age.
5. Singhi, P.(1999). Child health & well-being: Psychosocial care within & beyond hospital walls. In T.S. Saraswathi (Ed.).Culture, socialization and human development. New Delhi: Sage.

II. MINOR COURSE- MN G PR:
HOME SCIENCE MINOR-G PRACTICALS

Marks: Pr (ESE: 6Hrs) = 25	**Pass Marks: Pr (ESE) = 10**

(Credits: Practicals-01) **30 Hours**

Instruction to Question Setter for

End Semester Examination (ESE):

There will be one Practical Examination of 6Hrs duration. Evaluation of Practical Examination may be as per the following guidelines:

Experiment = 15 marks
Practical record notebook = 05 marks
Viva-voce = 05 marks

Practicals:

1. Observations of children (1 infant, 1 toddler) to understand their care needs
2. Interview of a mother of a school-going child to understand her perspective of care and child's well-being
3. Interaction with two adolescents (male, female) to explore their perspectives on well-being
4. Visit to a senior citizens' home to study their care and well-being
5. Lecture/workshop by a counselor on the significance of counseling
6. Participation in yoga/self-development session

Recommended Readings

- IGNOU. (2011). Positive psychology-2, MCFT-006 Applied social Psychology. New Delhi: IGNOU.
- Santrock, J.W. (2007). Life Span Development (3rd ed.). New Delhi: Tata McGraw-Hill.
- Seligman, M.E.P. (2002). Authentic happiness: Using the new positive psychology to realize your potential for lasting fulfillment. New York: Free Press.
- Sriram, R. (2004). Ensuring infant and maternal health in India. In J. Pattnaik (Ed.). Childhood in South Asia: A critical look at issues, policies and programs. Conn. USA: Information Age.
- Singhi, P. (1999). Child health & well-being: Psychosocial care within & beyond hospital walls. In T.S. Saraswathi (Ed.).Culture, socialization and human development. New Delhi: Sage.