

Syllabus

SUBJECT: HOME SCIENCE (B.A.) **National Education Policy-2020**



SRI DEV SUMAN UTTARAKHAND UNIVERSITY
BADSHAHITHAUL (TEHRI GARHWAL) UTTRAKHAND

SESSION 2023-24 Onwards

National Education Policy-2020
SRI DEV SUMAN UTTARAKHAND UNIVERSITY
BADSHAHITHAUL (TEHRI GARHWAL) UTTRAKHAND
SUBJECT: HOME SCIENCE (B.A.)

Curriculum Design Committee, Uttarakhand

Sr.No.	Name & Designation	BOS
1.	Prof. N.K. Joshi Vice-Chancellor ,Sridev Suman Uttarakhand University, Tehri	Chairman
2	Dr. Manmohan Singh Chauhan, Vice -Chancellor, Kumaun University, Nainital	Member
3.	Prof. O.P.S. Negi Vice-Chancellor, Uttarakhand Open University, Haldwani	Member
4.	Prof. Jagat Singh Bisht Vice-Chancellor, Soban Singh Jeena University Almora	Member
5.	Prof. Surekha Dangwal Vice-Chancellor, Doon University, Dehradun	Member
6.	Prof. M.S.M. Rawat Advisor, Rashtriya Uchchar Shiksha Abhiyan, Uttarakhand	Member
7.	Prof. K. D. Purohit Advisor, Rashtriya Uchchar Shiksha Abhiyan, Uttarakhand	Member

SUBJECT EXPERT COMMITTEE







Name	Designation	Affiliation
Prof. Preeti Kumari	Principal & Professor	O.N.S.Govt.Degree.College, Devprayag, TEHRI GARHWAL
Prof. Aditi Vats	Professor & Head	Department of FRM, G.B. Pant University, Pantnagar.

SYLLABUS PREPARATION COMMITTEE

Name	Designation	Affiliation
Dr. Preeti Sharma	Assistant Professor & Head Department Of Home Science	Govt. P.G. College, New Tehri, Uttarakhand
Dr. Anamika Chauhan	Assistant professor & Head Department Of Home Science	Chaman Lal P.G. College Haridwar- Uttarakhand

**SRI DEV SUMAN UTTARAKHAND UNIVERSITY
BADSHAHITHAUL, TEHRI GARHWAL (uttarakhand)**

Members of Board of Studies - B.A. HOME SCIENCE

S.N.	Name	Designation	Department	BOS	Signature
1.	Prof. Dinesh Chandra Goswami	Dean, Faculty of Arts Sri dev Suman University, uttarakhand	Geography	Chairman	
2.	Prof. Preeti Kumari	Principal, O.N.S. Govt. Degree College, Devprayag	Home Science	Member	
3.	Prof. Aditi Vats	Professor & Head Department of FRM, G.B. Pant University, Pantnagar.	Home Science	Member	
4.	Dr. Preeti Sharma	Assistant Professor Govt. P.G. College, New Tehri	Home Science	Member	
5.	Dr. Anamika Chauhan	Assistant Professor Chaman Lal P.G. College, Landhaura Haridwar	Home Science	Member	
6.	Prof. Janki Panwar	Principal Govt. P. G. College, Kotdwar	Higher Education	Member	
7.	Prof. Lavni Rajvanshi	Principal Govt. P. G. College, Jaiharikhal	Higher Education	Member	
8.	Prof. K. L. Talwar	Principal Govt. Degree College Chakrata	Higher Education	Member	
9.	Director	Uttarakhand Bhasha Sansthan, Rajpur Road, Dehradun		Member	

Semester-wise Titles of the Papers in U.G Programme (HOME-SCIENCE)

Year	Semester.	Course Code	Paper Title	Theory/Practical	Credits
B.A - 1 year	I	HSC/UG001	Food and Nutrition	MAJOR	4
	I	HSC/UG002	Cooking skills and healthy recipe development	PRACTICAL	2
	I	HSC/V/UG001	Food & Nutrition Skills – Food and Bakery Science	VOCATIONAL	3
	II	HSC/UG003	Introduction to Clothing & Textiles	THEORY	4
	II	HSC/UG004	Clothing & Textiles	PRACTICAL	2
	II	HSC/M/UG001	Human Development	MINOR	4
	II	HSC/V/UG002	Food & Nutrition Skills- Value Added Product from Fruits and Vegetables	VOCATIONAL	3
B.A - 2 year	III	HSC/UG005	Housing	MAJOR	4
	III	HSC/UG006	Housing	PRACTICAL	2
	III	HSC/V/UG003	Food & Nutrition Skills- Food standard and Quality control	VOCATIONAL	3
	IV	HSC/UG007	Mother craft & Human Development	MAJOR	4
	IV	HSC/UG008	Mother craft & Human Development	PRACTICAL	2
	IV	HSC/M/UG002	Human physiology	MINOR	4
	IV	HSC/V/UG004	Food & Nutrition Skills- Hands on training	VOCATIONAL	3
B.A. 3 year	V	HSC/UG009	Fabric Finishing and Laundry	THEORY	4
	V	HSC/UG010	Fabric Finishing and Laundry	PRACTICAL	2
	V	HSC/UG011	Resource Management	THEORY	4
	VI	HSC/UG012	Dietetics and Therapeutic Nutrition	THEORY	4
	VI	HSC/UG013	Dietetics and Therapeutic Nutrition	PRACTICAL	2
	VI	HSC/UG014	Family Welfare and Community Education	THEORY	4

Ahmed

Proposed Year wise Structure of UG Program in Home Science

Program Outcomes (POs)

The program has been framed in such a manner that students receive real feel of quality education by touching all aspects of human lifecycle.

Designed to enhance the capacity of students to understand universal and domain-specific values in Home Science

Develop the ability to address the complexities and interface among of self, societal and national priorities

Inculcate both generic and subject-specific skills to succeed in the employment market and standards of life

Promote research, innovation and design (product) development favoring all the disciplines in Home Science.

This programme develops scientific and practical approach among the students which helps in their day-to-day life.

B.A. First Year Certificate in Fundamental of Home Science Program Specific Outcomes (PSOs)

At the end of program following outcomes are expected from students:

Learn about the discipline of Home Science as a holistic field of study covering multiple facet sand requirements of human beings in day to day living, for example, achievement of appropriate milestones in personal development; awareness, need and use of family resources; access to adequate nutrition for whole some development; clothing fundamentals.

May have capabilities to start earning by enhancing their skills in the field of Nutrition and Textiles.

Semester I	Name of Paper	Credits	No of Lectures
	Food and Nutrition (Theory)	4	60
	Cooking Skills and Healthy Recipe Development (Practical)	2	30
	Total	6	90
Semester II	Name of Paper	Credits	Lectures
	Introduction to Clothing and Textile (Theory)	4	60
	Clothing and Textile (Practical)	2	30
	Total	6	90

B.A. Second Year

Diploma in Home Science

Specific Outcomes (PSOs)

At the end of program following outcomes are expected from students:

Develop sensitivity, resourcefulness, and competence to render service to enhance development of individuals, families, communities, and the nation at large.

Enhance abilities involved in acting as proactive agents of change in promoting the discipline of Family and Community Sciences.

Explore and decide upon viable avenues of self-employment and entrepreneurship.



Learn more about human and community & relationship.

Semester III	Name of Paper	Credits	No of Lectures
	Housing (Theory)	4	60
	Housing (Practical)	2	30
	Total	6	90
Semester IV	Name of Paper	Credits	No of Lectures
	Mother Craft and Human Development (Theory)	4	60
	Mother Craft and Human Development (Practical)	2	30
	Total	6	90

**B.A. Third Year
Degree in Bachelor of Arts Program
Specific Outcomes (PSOs)**

- Programme is framed to Encourage a genre of responsible students with a passion for lifelong learning and entrepreneurship, it also generates multi-skilled leaders with a holistic perspective that cuts across disciplines.
- Promote research, innovation and design (product) development favoring all the disciplines in Home Science.
- Enhance digital literacy and apply them to engage in real time problem solving and idea tion related to all fields of Home Science.
- Appreciate and benefit from the symbiotic relationship among the five core disciplines of Home Science – Resource Management, Food Science and Nutrition, Textiles and Clothing, Human Development and Family Studies and Extension and Communication.
- After this degree programme students can be benefitted by getting jobs in various fields like government sector, working with NGOs, jobs as an extension worker, Education etc. and also, they can feel the sense of entrepreneurship as well.

Semester V	Name of Paper	Credits	No. of Lectures
	Fabric Finishing and Laundry (Theory)	4	60
	Resource Management (Theory)	4	60
	Fabric Finishing and Laundry (Practical)	2	30
	Total	10	150
Semester VI	Name of Paper	Credits	No. of Lectures
	Dietetics and Therapeutic Nutrition (Theory)	4	60
	Family Welfare and Community Education (Theory)	4	60
	Dietetics and Therapeutic Nutrition (Practical)	2	30
	Total	10	150

B.A. I Semester I Home Science Paper 1
Food and Nutrition (Theory)

Programme/Class: Certificate	Year:1	Semester:1
Subject: Home Science		
Course Code: HSC/UG001 (Major)	Course Title: Food and Nutrition (Theory)	
Course outcomes: <ul style="list-style-type: none"> • The student at the completion of the course will be able to: • Gain Knowledge of Nutrition. • Students will get familiar with different methods of cooking • Acquaint students with practical knowledge of nutrient rich foods. 		
Credits:4	Core Compulsory/	
Max.Marks:25+75	Min. Passing Marks:	
TotalNo.ofLectures-60		
Units	Topic	No of Lectures
I	Food and Nutrition Food-meaning, Classification and function of Food. Basic Food Groups. Energy- Factors affecting total energy requirements of the body. Balanced Diet- Definition and Factors affecting a Balanced Die	20
II	Nutrition-Concept of Nutrition Nutrients-Macro and Micro (Protein, Carbohydrate, Fat, Vitamins, Minerals, Water) sources, Functions, Requirements, Digestion, absorption and deficiency diseases	20
III	Cooking Methods - Different Methods of Cooking, Advantages and Disadvantages. Preservation of Nutrients while cooking.	12
IV	Traditional methods of enhancing nutritional value of foods-Germination, Fermentation, Food Synergy etc.	08


Suggested Readings:

- Sumati R Mudami, "Fundamentals of food Nutrition and Diet Therapy", New Age International Pvt. Ltd, New Delhi, 6thEd. (2018)
 - B Srilakshmi, "Nutrition science", New Age International Publication
 - M.Swaminathan, "Food & Nutrition", The Bangalore Press.
 - Punita Sethi and Poonam Lakda, "Aahar Vigyan, Suraksha evam Poshan"; Elite Publishing House, New Delhi; 2015
 - Dr. Anita Singh, Aahar Evam Poshan Vigyan, Star Publications, Agra
 - Chauhan Anamika, bhajye Evam Poshan Vigyan, pragatiprakashan
 - Dr. Devina Sahai, Aahar Vigyan, New Age International Publishers, New Delhi
- Suggestive digital platform <http://sweblinks-ePG-Pathshala, IGNOU & UPRTOU online study material Svayam Portal>
<http://heecontent.upsdc.gov.in/Home.aspx>

This course can be opted as an elective by the students of following subjects: Open for all
The eligibility for this paper is 10+2 with any subject

Suggested Continuous Evaluation Methods:

- Seminar/Presentation on any topic of the above syllabus
- Test with multiple choice questions/short and long answer- Questions



B.A. I Semester I Home Science
Cooking skills and healthy recipe development

Programme/Class: Certificate	Year: I	Semester: I
Subject: Home Science (Practical)		
Course Code: HSC/UG002 Practical	Course Title: Cooking skills and healthy recipe development	
Course outcomes:		
<ul style="list-style-type: none"> ▪ Students will get familiar with different methods of cooking ▪ Acquaint students with practical knowledge of nutrient rich foods 		
Credits:2	Core Compulsory/ Elective	
Max. Marks: 25+75	Min. Passing Marks:	
TotalNo.ofLabPeriods-30(60hours)		
Unit	Topic	No. of lab. periods
I	Basic Cooking skills - Weighing of raw materials - Preparing different food items - Different styles of cutting fruits and vegetables - Salad Decoration/Dressing	15
II	Preparation of nutrient rich dishes - Protein rich dish - Carbohydrate rich dish - Fat rich dish - Vitamins rich dish - Minerals Rich Dish - Fiber Rich Dish	15
Suggested Readings: <ul style="list-style-type: none"> • Sumati R Mudami, "Fundamentals of food Nutrition and Diet Therapy" , New Age International Pvt. Ltd, New Delhi , 6th Ed. (2018) • B Srilakshmi," Nutrition science", New Age International Publication • Chauhan Anamika, bhajye Evam Poshan Vigyan, pragatiprakashan • M.Swaminathan , " Food & Nutrition", The Bangalore Press. • Punita Sethi and Poonam Lakda , "Aahar Vigyan, Suraksha evamPoshan" ; Elite Publishing House, New Delhi ;2015 		
This course can be opted as an elective by the students of following subjects: Open for all		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none"> • Test with multiple choice questions/short and long answer questions • Menu planning and calculation of nutrient requirement • Nutritive value calculation of various nutrient rich dishes 		
Course prerequisites: To study this course, a student must have had the subject _____ in class/12 th /certificate/diploma.		
Suggested equivalent online courses oIGNOU and othe rcentrally/state operated Universities/MOOC plat forms such as "SWAYAM" in India and abroad., http://heecontent.upsdc.gov.in/Home.aspx		

(Handwritten signatures)

(Handwritten signature)

**B.A.I Semester 2 Home Science
Introduction to Clothing & Textiles**

Programme/Class: Certificate	Year: I	Semester: 2
Subject: Home Science		
Course Code: HSC/UGC003 (Major)	Course Title: Introduction to Clothing and Textiles (Theory)	
Course out comes: <ul style="list-style-type: none"> • Learn about scope of textile and clothing • Understanding why fabrics are different • Learn how fabrics can be manufactured • Understand basic clothing concepts 		
Credits: 4	Core Compulsory/ Elective	
Max. Marks: 25+75	Min. Passing Marks:	
Total No. of Lectures-60		
Unit	Topic	No. of Lectures
I	Introduction a) Introduction to Clothing and Textile (b) Its importance in day-to-day life (c) Scope (d) Classification of textile fiber on the basis of their source (e) General properties of fibers-primary and secondary	15
II	Knowing Fibers- Manufacture, processing, properties and uses of (a) Cellulosic Fiber-cotton, Linen (b) Protein Fibers-Wool, Silk (c) Synthetic/Manmade Fibers-Nylon, Polyester, Acrylic, Rayon	15
III	Yarn construction- mechanical and chemical spinning; Different stages of yarn construction; Types of yarn- simple, textured and spun; simple- simple, ply, cord; novelty; ply, cable, double and novelty; yarn numbering and yarn twist	15
IV	Weaving technology: Definition, Characteristics of woven fabrics; Types of weaves. Loom-Parts of loom; Classification and types of looms; Motions of the loom. Non-woven fabrics-meaning, types, methods and uses. Knitting technology: Definition, classification, material and equipment; Methods of knitting- Weft knitting and warp knitting;	15
This course can be opted as an elective by the students of following subjects: Open for all		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none"> • Seminar on any topic of the above syllabus. • Test with multiple choic equestions/short and long answer questions. • Attendance 		
Suggested equivalent online courses: IGNOU & Other centrally/state operated Universities/MOOC plat forms such as "SWAYAM" in India and Abroad		



**B.A. I - Semester 2 Home Science
Clothing & Textiles**

Programme/Class: Certificate	Year: I	Semester: 2
Subject: (Home Science)		
Course Code: HSC/UG004 Practical	Course Title: Clothing and Textiles (Practical)	
Course outcomes: <ul style="list-style-type: none"> • Ability to identify fibers and fabrics • Understanding why fabrics are different 		
Credits: 2	Core Compulsory/ Elective	
Max. Marks: 25+75	Min. Passing Marks:	
Total No. of lab. periods-30 (60hours)		
Unit	Topic	No. of lab. periods
I	Identification of fibers and fabrics (a) Fiber identification tests- Visual burning and microscopic test- natural and synthetic.	15
II	Drafting and lifting plan of different weaves on graph paper and glaze paper. Visit to a cloth weaving unit and report writing. Hand knitting samples/article.	15
Suggested Readings: <ul style="list-style-type: none"> • Cutting Tailoring and Dress Making: National open School, B-31-B Kailash Colony, New Delhi – 1100048. • R Bhatia & C Arora (1999), Introduction to Clothing and Textile, Printed by Macho Printery, Raopura, Baroda. 		

- Complete Guide to Sewing by Reader's Digest: published by The Reader's Digest Association (Canada) Ltd. Montreal-Pleasant ville, NY, 2002.
- Helen J Armstrong , Pattern Making for Fashion Design, Prentice Hall
- Gerry Cooklin, Introduction to Clothing Manufacture, Blackwell Science, UK,1991
- Metric Pattern cutting & Grading by Winfred Aldrich.
- Khanuja, Reena. Vastra Vigyaan ke Sidhant, Agrawal Publication, Agra.

1.Suggestive digital platforms weblinks-Svayam
Portal,

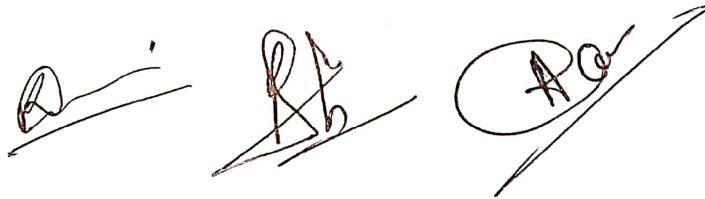
<http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- Preparation of samples of various types of weaves.
- Evaluation of Prepared knitted samples.
- Record file preparation, evaluation and Attendance.

Course prerequisites: To study this course, a student must have the subject ALL in class12th.

.....



B.A. I Semester 2 Home Science

Human Development (Theory)

Programme/Class: Diploma	Year: 1	Semester: 2
Subject: Home Science		
Course Code: HSC/M/UG001s Minor	Course Title: Human Development (Theory)	
Course Outcomes: The student at the completion of the course will be able to: <ul style="list-style-type: none"> ● Explain the need and importance of studying human growth and development across lifespan ● Identify the biological and environmental factors affecting human development ● Learn about the characteristics, needs and developmental tasks of childhood to Adulthood Age 		
Credits: 4	Minor / Elective	
Max. Marks: 25+75	Min. Passing Marks:	
Total No. of Lectures-60		
Units	Topic	No. of Lectures
I	Introduction to Human Development <ul style="list-style-type: none"> ● Concept ,Definition and need to study Human Development ● Domains, Stages and contexts of development. Principles of Growth and Development. Determinants of Development-Heredity and Environment. ● Differences between growth and Development 	15
II	Childhood - <ul style="list-style-type: none"> ● Developmental Tasks during Childhood ● Physical and Motor Development ● Social and emotional development ● Cognitive and language development 	15
III	Puberty & Adolescent age Meaning, characteristics, Problems <ul style="list-style-type: none"> ● Physical and Motor Development ● Social and emotional development ● Personality Development ● Role of Family and Teachers 	15
IV	Adulthood Age <ul style="list-style-type: none"> ● Developmental Tasks during Adulthood ● Physical and Motor Development ● Social and emotional development ● Changes and Adjustment during Adulthood 	15

Ahor

Suggested Books:

- Dr. Brinda Singh, Manav Sharirevam Kriya Vigyan Panchcheel Prakashan, Jaipur, 2015, 15th Ed.
- Chatterjee, C.C, "Human Physiology" Medical Allied Agency: Vol I, II.
- Text Book of Biology for 10+2 Students (NCERT)
- Berk, L.E. Child Development New Delhi: Prentice Hall (2005) (5th ed.).
- Berk L.E. Child Development Allyn and Bacon 1992 (6th) Edition.
- Keenan, T., Evans, S., & Crowley, K. An introduction to child development, Sage (2016)
- Hurlock E. Child Development.

Suggested Continuous Evaluation Methods:

- Seminar/Presentation on any topic of the above syllabus
- Test with multiple choice question/short and long answer questions

Phan

**B.A. 2 Semester 3 Home Science
Housing**

Programme/Class: Diploma	Year:2	Semester:3
Subject: Home Science		
Course Code: HSC/UG005 (Major)	Course Title: Housing (Theory)	
Course outcomes: <ul style="list-style-type: none"> • Grasp knowledge of Housing need & selection of site in real life situations. • Comprehending Housing plans for residential purpose. • Appreciate principles of design and the contributing factors to refine personal Aesthetic senses. 		
Credits:4	Core Compulsory/ Elective	
Max.Marks:25+75	Min. Passing Marks:	
TotalNo.ofLectures-60		
Unit	Topic	No. of Lectures
I	Needs and Importance of House, Difference between House and Home, ways to acquire house (Own and rented). Factors influencing selection and purchase of house and selection of site Characteristics of the plot - size, proportion, shape, types of houses.	15
II	General principles of Housing- aspect, prospect, grouping, roominess, flexibility, lighting, ventilation and sanitation.	15
III	Planning different residential spaces in a house, Planning house for different income groups Kitchen planning- its need, Type of kitchen plans.	15
IV	Building Material, storage Area, Special Houses, water supply in the house. House construction-principles Financing a house: Home loan eligibility, pre-payment. Home loan scheme in India.	15



Suggested Readings:

- Khanuja, Reena(2018) Grah Vyavastha avam Grah Sajja. Agrawal Publications, Agra ISBN:978-93-81124-96-3
- Patni Manju & Sharma Lalita, Grah Prabandh, Star Publications Agra.
- Cherunilam, F., & Hedggade, O.D. (1987). *Housing in India*. Bombay: Himalaya Publishing House.
- Craig, H.T. and Rush, O.D. (1966). *Homes with Character*. Heath, 1966.
- Faulkner, R. & Faulkner, S. (1961) *Inside Today's Home*. Rev. ed. ©Holt, R Inehart & Winston, Inc.
- Goldstein, H. & Goldstein V. (1954). *Art in Everyday Life* Macmillan Publishers.

Suggestive digital platforms weblinks-

<http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- Seminar/presentation on any topic of the above syllabus.
- Test with multiple choice questions/short and long answer questions.
- Attendance.

Suggested equivalent online courses:

- IGNOU & Other centrally/state operated Universities/MOOC plat forms such as "SWAYAM" in India and Abroad.



**B.A. 2 Semester 3 Home Science
Housing (Practical)**

Programme/Class: Diploma	Year:2	Semester:3
Subject: Community and Essential Science (Home Science)		
Course Code: HSC/UG006 Practical	Course Title: Housing (Practical)	
Course outcome		
<ul style="list-style-type: none"> • Understand of material for house construction • Develop understanding for house planning 		
Credits: 2	Core Compulsory/Elective	
Max.Marks:25+75	Min. Passing Marks:	
Total No. of lab. Periods-30(60hours)		
Unit	Topic	No. of lab. periods
I	<ul style="list-style-type: none"> • Making House Plans for various income levels, home planning symbols • Identification of building materials • Land-scape planning 	15
II	<ul style="list-style-type: none"> • Visit to any two-construction site and report writing. • Understanding Home Loan, visit a nearby Housing financing Agency • Draw House Plans with Standard Specifications. 	15



Suggested Readings:

- Faulkner, R. and Faulkner, S. (1975). Inside Today's Home, New York: Rinehart.
- Gandotra, V., and Jaiswal, N. (2008). Management of Work in Home, New Delhi: Dominant Publishers and Distributors. (ISBN No. 81-7888-526-3)
- Khanuja, Reena (2018) Grah Vyavastha avam Grah Sajja. Agrawal Publications, Agra ISBN: 978-93-81124-96-3
- Patni Manju & Sharma Lalita, Grah Prabandh, Star Publications Agra.
- Cherunilam, F., & Hedggade, O.D. (1987). *Housing in India*. Bombay: Himalaya Publishing House.
- Craig, H.T. and Rush, O.D. (1966). Homes with Character. Heath, 1966.
- Faulkner, R. & Faulkner, S. (1961) Inside Today's Home .Rev. ed. © Holt, Rinehart & Winston, Inc.
- Goldstein, H. & Goldstein, V. (1954). *Art in Everyday Life* Macmillan Publishers.

Suggestive digital platform forms weblinks-

- bit.ly/3fJfghi
 - <https://bit.ly/39mTwGQ>
 - <https://bit.ly/2JoXB2e>
 - <https://bit.ly/3ljkrWf>.
- Svayam Portal,
<http://heecontent.upsdc.gov.in/Home.aspx>

Suggested Continuous Evaluation Methods:

- Practical work .
- Attendance.

Suggested equivalent online courses:

IGNOU & Other centrally/state operated Universities/MOOC platform forms such as "SWAYAM" in India and Abroad



B.A. 2 Semester 4 Home Science Paper 1
Mother craft & Human Development (Theory)

Programme/Class: Diploma	Year:2	Semester:4
Subject: Home Science		
Course Code: HSC/UG007 Major	Course Title: Mother craft & Human Development (Theory)	
Course outcomes: <ul style="list-style-type: none"> • Explain the need and importance of studying human growth and development across life span • Identify the biological and environmental factors affecting human development • Learn about the characteristics, needs and developmental tasks of Infancy/ prenatal and childhood Age 		
Credits: 4	Core Compulsory/ Elective	
Max.Marks:25+75	Min. Passing Marks:	
TotalNo.ofLectures-60		
Unit	Topic	No. of Lectures
I	Conception, Pregnancy and Childbirth, Stages of birth, Types of delivery (Natural, C-section, breech, home vs. assisted delivery) Physical and emotional changes during pregnancy. Problems of pregnancy period. Prenatal period: Prenatal development stages: genetic and environment factors	15
II	Importance of Human Development from a Life-span perspective. Issues in Human development. Stages of Human Development Determinants of development; biological and environmental; Principles of Growth and Development: Norms and Milestones factor affecting development, Areas of development	18
III	Infancy: The neonate up to 4 weeks: physical, physiological, cognitive and social capabilities. Four weeks up to 2 years. Physical and motor, social and emotional, cognitive and language development. Early Environment and its importance, need for desirable child rearing, growth monitoring	15

IV	Early childhood years: Development milestones of and antecedent influences in physical and motor, social, emotional, cognitive and language development, play activities.	12
<p>Suggested Books:</p> <ul style="list-style-type: none"> • Dr. Brinda Singh, Manav Sharir evam Kriya Vigyan Panchcheel Prakashan, Jaipur, 2015, 15th Ed. • Chatterjee, C.C, "Human Physiology" Medical Allied Agency: Vol I, II. • Text Book of Biology for 10+2 Students (NCERT) • Berk, L.E. Child Development New Delhi: Prentice Hall (2005) (5th ed.). • Berk L.E. Child Development Allyn and Bacon 1992 (6th) Edition. <ul style="list-style-type: none"> • Chauhan & Mishra, Agrim poshan Evam Manav Vikash, Pragati prakashan • Keenan, T., Evans, S., & Crowley, K. An introduction to child development, Sage (2016) • Hurlock E. Child Development. 		
<p>Suggested Continuous Evaluation Methods:</p> <ul style="list-style-type: none"> • Seminar/Presentation on any topic of the above syllabus • Test with multiple choice question/short and long answer questions Attendance 		
<p>Course prerequisites: The eligibility for this paper is 10+2 with any subject</p>		



**B.A. 2 Semester 4 Home Science
Mother craft & Human Development (Practical)**

Programme/Class: Diploma	Year:2	Semester:4
Subject: Home Science		
Course Code: HSC/UG008 Practical	Course Title: Mother craft & Human Development (Practical)	
Course outcomes: <ul style="list-style-type: none"> • Explain the need and importance of studying human growth and development across life span • Identify the biological and environmental factors affecting human development • Learn about the characteristics, needs and developmental tasks of Infancy and childhood . 		
Credits: 2	Core Compulsory/ Elective	
Max.Marks:25+75	Min. Passing Marks:	
Total No. of lab. Periods 30		
Unit	Topic	No. of Lab. periods
I	-Visit to Child Care Centers/anganwadi - Lesson plan for school child - Observations of child rearing practices in families from different social classes	15
II	-Case study of Infancy – sensory and creative evaluation - Observe of five pregnant ladies with physical and emotional changes, report writing.	15
Suggested Readings: 1. Schaim berg, L B (1988) Child and Adolescent Development. Macmillian Publishing Company, New York. 2. Papalia, D. E., Olds, S. W. (1978). Human Development. Mc. Graw-Hill, New York. 3. Gorden, K. J., (1975). Human Development. A Transactional perspective. 4. Sharma, Kamlesh, Manav Vikas, Star publication		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none"> • Assessment of Educational Plan and Visits Record. • Practical work 		





**B.A. II Semester 4 Home Science
Human Physiology**

Programme/Class: certificate	Year:2	Semester:4
Subject: Home Science		
Course Code: HSC/M/UG002 (Minor)	Course Title: Human Physiology	
Course outcomes: The student at the completion of the course will be able to: <ul style="list-style-type: none"> • Learn the physical structure of human body • Understand the human physiology and system. • Gain knowledge about different body system 		
Credits:4	Core Compulsory/ Elective	
Max.Marks:25+75	Min. Passing Marks:	
TotalNo.ofLectures-60		
U n i t	Topic	No of Lectures
I	Introduction to Human body: Organs, tissue and cell, cell structure, cellular organelles and their functions. Introduction to blood and lymphatic system: Blood - Composition and functions, Plasma Protein - Composition and functions.	20
I I	. Endocrine system Overview of endocrine system, feedback mechanism/cascade. Structure of main endocrine glands and their functions: Pituitary, Thyroid, and Pancreatic hormones	15
I I I	Cardiovascular system: Structure of heart, circulations, cardiac output (Definition and factors affecting), blood pressure (Definition and factors affecting)	10
I V	Digestive system: Overview of the Gastrointestinal Tract, organization and functions. Structure and functions of: Stomach, Liver, Gallbladder, Pancreas	15
<ul style="list-style-type: none"> • Suggested Readings: • Ganong WF (2014). Review of Medical Physiology, 24th ed. McGraw Hill. • Auther, J. Vendors (2014) Human Physiology Mechanism of body function McGraw Hill Book Co. • Chaudhari S K.(2000) Concise Medical Physiology.3rd.Edition. Central. • Mahapatra, A.B.S.(2003):Essentials of Medical Physiology.3rd Edition. Current Books International. Svayam Portal , http://heecontent.upsdc.gov.in/Home.aspx		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none"> • Seminar on any topic of the above syllabus. • Test with multiple choice questions/short and long answer questions. • Attendance 		

**B.A. 3 Semester 5 Home Science
Fabric Finishing and Laundry**

Programme/ Class: Degree		Year: 3	Semester: 5
Subject: Home Science			
Course Code: HSC/UG009 (Major-1)		Course Title: Fabric Finishing and Laundry (Theory)	
Course Outcomes:			
<ul style="list-style-type: none"> • Learn about finishes done on fabric • Knowing about dyeing fabrics • Learn how printing on fabrics is carried • Knowing the importance of appropriate laundry method 			
Credits: 4		Core Compulsory	
Max. Marks: 25+75		Min. Passing Marks:	
Total No. of Lectrures-60			
Unit	To pics	No. of Lecture	
I	Finishes (a) Classification of fabric finishes (b) Study of purpose and process of finishes. (i) General Purpose finishes- Bleaching, Mercerization, Calandring, Sanforization, Tentering, Singeing, Scouring (ii) Functional Finishes	15	
I 1	Dyeing (a) Classification of dyes- Natural v/s Synthetic, advantages and limitations (b) Theory of Dyeing (c) Properties and use of Dyes-Basic, Acidic, Direct, Azoic, Natural, Sulphur, Vat, Disperse and Reactive dyes (d) Resist Dying Techniques- Tie- Die, Batik	15	
I I I	Printing (a) Direct Printing- Block, Screen, Stencil, Roller (b) Transfer Printing (c) Discharge printing, Resist Printing (d) Polychromatic, Inkjet and Digital printing techniques (e) After treatment of dyed and printed goods.	15	
I V	Laundry and dry cleaning of fabrics (a) Methods of Laundry – Wet and Dry cleaning, friction, suction, kneading and squeezing (b) Dry cleaning process (c) Reagents of Laundry - soaps and detergents (d) Laundry equipments.	15	





Suggested Readings:

- Marsh JT: Textile Finishes
- Trotman Er: Dyeing and Chemical Technology of Fibres
- Joseph M: Introduction to Textiles
- Corbman P Bernard: Textiles- Fibre to Fabric
- Hollen& Saddler: Introduction to Textile
- J. Hall: The standard Hand book of Textiles, Wood Head Publication, 2004
- J. E. Smith: Textile Processing- Printing, Dyeing, Abhishek Publishing, 2003
- Kate Broughton: Textile Dyeing, RockportPublishers, 1996
- W. S. Murphy: Textile Finishing, Abhishek Publication, 2000
- Naik. D. Shailaja, Jacquie. A. Willson: Surface Designing of Textile Fabrics, New Age International Publishers, 2006
- Bharga, Bela. VastraVigyaan, Univ. Book House Pvt. AvamDhulai Kala, University Book House Pvt Ltd. Jaipur
- Patni, Majnu, VastraVigyaanAvamParidhankaParichay, Star Publications, Agra.

Suggestive digital platforms weblinks-
Swayam Portal, <https://heecontent.upsdc.gov.in/Home.aspx>

This course can be opted as an elective by the students of following subjects: Open for all

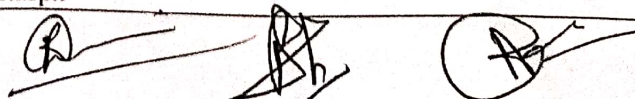
Suggested Continuous Evaluation Methods

- Seminar on any topic of the above syllabus
- Test with multiple choice questions/ short and long answer questions.
- Subjective long questions



**B.A. 3 Semester 5 Home Science
Fabric Finishing and Laundry (Practical)**

Programme/Class: Degree	Year:3	Semester:5
Subject: Home Science		
Course Code: HSC/UG010 Practical	Course Title: Fabric Finishing and Laundry (Practical)	
Course outcomes: 1- Performing printing on fabrics 2- Performing dyeing on fabrics. 3- Performing different appropriate laundry methods.		
Credits:2	Core Compulsory	
Max Marks:25+75	Min. Passing Marks:	
Total No. of lab. Periods-30		
Unit	Topic	No. of lab. periods
I	Stain removal & demonstration of dry cleaning, Identification of labels. visit to a commercial dry-cleaning unit/Textile mill.	15
II	Dyeing Techniques- Tie- Die, Batik, Printing Techniques- Block, Screen, Stencil, Roller, Spray. Preparation of different Printing sample	15
Suggested Readings: <ul style="list-style-type: none"> ● Marsh JT: Textile Finishes ● Trotman Er: Dyeing and Chemical Technology of Fibres ● Joseph M: Introduction to Textiles ● Corbman P Bernard: Textiles- Fibre to Fabric ● Hollen& Saddler: Introduction to Textile ● J. Hall: The standard Hand book of Textiles, Wood Head Publication, 2004 ● J. E. Smith: Textile Processing- Printing, Dyeing, Abhishek Publishing, 2003 ● Kate Broughton: Textile Dyeing, RockportPublishers,1996 ● W. S. Murphy: Textile Finishing, Abhishek Publication, 2000 ● Naik. D. Shailaja, Traditional Embroideries of India, New Age International Publishers, 1996 ● Naik. D. Shailaja, Jacquie. A. Willson: Surface Designing of Textile Fabrics, New Age International Publishers, 2006 ● Bharga, Bela. VastraVigyaan, Univ. Book House Pvt. AvamDhulai Kala, University Book House Pvt Ltd. Jaipur ● Patni, Majnu, Vastra Vigyaan Avam Paridhan kaParichay, Star Publications, Agra. <p>Suggestive digital platforms weblinks- Swayam Portal, https://heecontent.upsdc.gov.in/Home.aspx</p>		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none"> ● Test with multiple choice questions/ short and long answer questions ● Practical work 		
Suggested equivalent online courses: IGNOU and other central/state operated Universities/MOOC platforms such as "SWAYAM" in India and abroad Swayam Portal. http://heecontent.upsdc.gov.in/Home.aspx		


 22


**B.A. 3 Semester 5 Home Science
Resource Management**

Programme/Class: Degree	Year3	Semester:5
Subject: Home Science		
Course Code: HSC/UG011	Course Title: Resource Management	
Course outcomes: The student at the completion of the course will be able to:		
<ul style="list-style-type: none"> ● Learn the family resource management as a whole ● Understand the Decision making and use of resources throughout the Family life cycle. ● Gain knowledge about Time, Money &Energy as a Resource. ● Appreciate Household Equipment for work simplification 		
Credits:4	Core Compulsory/ Elective	
Max.Marks:25+75	Min. Passing Marks:	
TotalNo.ofLectures-60		
Unit	Topic	No of Lectures
I	Introduction to Resource Management: Basic Concepts, Purpose and Obstacles of Management. Process of Management – Planning, Organization, Controlling and Evaluation. Motivating Factors in Management –Values, Goals and Standards- Definition and Classification.	20
II	Resources, Decision making & Family life cycle: Meaning, Characteristics, Types and Factors affecting the use of Resources. Steps and Role of decision making in management. Stages of family life cycle.	15
III	Time, Energy and Money Management: Time as a Resource, Step in making Time Plan, Tools and Aids in Time Management.	10
IV	Energy as a Resource, Work Curve, Fatigue-Types, Causative Factors and alleviating techniques, Family income as a Resource, Source of Income and Expenditure and Saving. Preparation of family budget in view of family income	15
<ul style="list-style-type: none"> ● Suggested Readings: ● Deacon R.E. and Firebaugh F.M. (1998) Family Resource Management- Principles and application. N. Delhi: Roy Houghton Mifflin Company. ● Faulkner, R. & Faulkner, S. (1961). Management for Modern Families. N. Delhi: Sterling Publisher Ltd. 		
Svayam Portal , http://heecontent.upsdc.gov.in/Home.aspx		
Suggested Continuous Evaluation Methods:		
<ul style="list-style-type: none"> ● Seminar on any topic of the above syllabus. ● Test with multiple choice questions/short and long answer questions. 		



**B.A. 3 Semester 6 Home Science
Dietetics and Therapeutic Nutrition**

Programme/Class Degree	Year: 3	Semester: 6
Subject: Home Science		
Centre Code: HSC/UG012 (Major-1)	Course Title: Dietetics and Therapeutic Nutrition (Theory)	
Course outcomes: 1- Knowledge of principles of diet therapy 2- Develop and understand modification of the normal diet for therapeutic purposes 3-Practical knowledge of dietary management in some common disorders.		
Credits:4	Core Compulsory	
Max.Marks: 25+75	Min. Passing Marks:	
Total Lectures- 60		
Unit	Topics	No. of Lectures
I	Introduction (a) Definition of Health Dietetics and Therapeutic Nutrition (b) Importance of Diet Therapy (c) Facts about fast foods/ Junks foods (d) Objectives of therapeutic Diet (e) Principles of diet therapy	08
II	Diet and feeding methods a) Modification of normal diets for therapeutic purposes b) Methods of modifications • On the basis of nutrients • On basis of consistency c) Different feeding methods • Oral feeding • Tube feeding	12
III	Diet during fevers (a) Introduction to fever –Acute Fever, Chronic fever (b) Important changes in nutrition during fever. (c) Modification of the diet.	20
IV	Weight Management (a) Overweight and Obesity, cause and modification of diet. (b) Underweight –Causes, diet modification,	20


 24

Suggested Books:

- Sumati R Mudambi- "Fundamentals of food, Nutrition and Diet Therapy", New Age International Pvt. Ltd, New Delhi, 6th Edition (2018).
- B Srilakshmi- "Dietetics", New Age International Publishers, New Delhi 2017.
- Bamji MS, Krishnaswamy K and Brahman GNV (Eds) (2009), Text book of Human Nutrition, Edition, Oxford & IBH Publishing Co. Pvt. Ltd New Delhi.
- Dr. Brinda Singh-Aahar Vigyan evam Poshan, PanchsheelPrakashan, Jaipur, 2015; 13th Ed.
- Dr. Devinasahani, Samanya Evam Upcharatmak Poshan, New Age International Publishers.
- Dr. Sheel Sharma, "Nutrition and Diet Therapy", PEEPEE Publishers and Distributers (P) Ltd. Delhi, 2014, 1st Ed.
- Shubhangini A Joshi, - "Nutrition and Dietetics", Mc Graw Hill Education Private Ltd., New Delhi, 2013.
- Kumud Khanna- "Text book of Nutrition and Dielectric", Elite Publishing House Pvt. Ltd, New Delhi, 7th Ed. 2013.
- M Swaminathan-Essentials of food nutrition, Vol II, Applied Aspects, The Bangalore Printing Publishing Co. Ltd, Bangalore, 2nd Edition 1985, Reprint 1997.

Suggested equivalent online courses:

IGNOU and other centrally/state operated Universities/ MOOC platforms such as "SWAYAM" in India and abroad.

<http://heecotent.upsdc.gov.in/Home.aspx>

Further Suggestions:

- Students can opt. dietitian, nutrition advisor/ Nutritionist as a career in private and government sector as well as extend knowledge by joining advance course in same discipline.



B.A. 3 Semester 6 Home Science
Therapeutic Diet Preparation and Nutrient Evaluation (Practical)

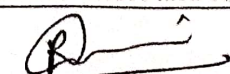
Programme/Class: Degree	Year:3	Semester:6
Subject: Home Science		
Course Code: HSC/UG013 Practical	Course Title: Therapeutic Diet Preparation and Nutrient Evaluation (Practical)	
Course outcomes: 1-Gain Knowledge of principles of diet therapy 2-Develop and understand modification of the normal diet for therapeutic purposes 3-Practical knowledge of dietary management in some common disorders.		
Credits:2	Core Compulsory	
Max Marks:25+75	Min. Passing Marks:	
Total No. of lab. Periods-30		
Unit	Topic	No. of lab. periods
I	Modification of normal diet for therapeutic purposes, preparation and presentation Dietary Modification for weight management- Preparation and Nutrient Calculation of diet in- -Overweight & obesity -Underweight	15
II	Therapeutic Diet preparation and Nutrient Calculation of -Diet in fever -Diet in diarrhea	15
Suggested Readings: <ul style="list-style-type: none"> ❖ Sumati R. Mudambi- “Fundamental of food, Nutrition and Diet Therapy”, New Age. International Pvt. Ltd, New Delhi, 6thEdition (2018). ❖ B. Srilaksmi, “Dietetics”, New Age International Publishers, New Delhi 2017 ❖ Chauhan A.& Jan Muzamil, Food for Heal, ABS publication ❖ Bamji MS, Krishnaswamy K and Brahmam GNV(Eds)(2009), Text book of Human Nutrition, 3rd edition, Oxford & IBH Publishing Co. Pvt. Ltd. New Delhi. ❖ Dr. Sheel Sharma, “Nutrition and Diet Therapy” PEEPEE Publishers and Distributers (P) ltd. Delhi, 2014, IstEd. 		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none"> • Test with multiple choice questions/ short and long answer questions 		
Suggested equivalent online courses: IGNOU and other central/state operated Universities/MOOC platforms such as “SWAYAM” in India and abroad Svayam Portal.		

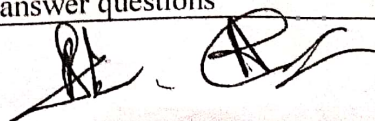


B.A. 3 Semester 6 Home Science

Family Welfare and Community Education (Theory)

Programme/Class: Degree	Year:3	Semester:6
Subject: Home Science		
Course Code: HSC/UG014 (Major-2)	Course Title: Family Welfare and Community Education (Theory)	
Course outcomes: <ul style="list-style-type: none">• Prepare the students to understand community education courses• Students will get familiar with different areas of family welfare• Explain the need and importance of family welfare and community education		
Credits: 4	Core Compulsory	
Max Marks:25+75	Min. Passing Marks:	
Total No. of Periods-60		
Unit	Topic	No. of lab. periods
I	Family Welfare: meaning, Need, Objectives of family welfare. Rights and National Policy for Children and Women Nari Niketan, Bal sudhar Garh,	15
II	Family and child welfare services working at national and international level; ICCW, ICDS and others, W.H.O. UNICEF, CARE, Rural extension services and community ICDS, DWCRA, IRDP and CHEB	15
III	Family relationship, Child Parent relationship, responsibilities of parts relationship of home, school and community.	10
IV	The role of teacher and other specialists in parents and community education programmes. Teacher as motivator, community work, guidance of youth, Youth ethical consideration in dealing with parents and community.	20
Suggested Readings: <ol style="list-style-type: none">1. Gangrade, K.D. (1971) Community Organization in India. Popular Prakashan, NewDelhi2. Dahama, O. P. and Bhatnagar, O.P. (1980) Extension and Communication for Development, Oxford and IBH.3. State of World Children, UNICEF Annual Publication.4. Hans Nagpaul. (1980) Culture, Education and Social Welfare. Chand and Company, New Delhi.5. Chaudhry, D. Paul, (1980). Child Welfare and Development. NIPCCD, New Delhi.		
Suggested Continuous Evaluation Methods: <ul style="list-style-type: none">• Test with multiple choice questions/ short and long answer questions		


97





Suggested equivalent online courses:

IGNOU and other central/state operated Universities/MOOC platforms such as
"SWAYAM" in India and abroad Svayam Portal. <http://heecontent.upsdc.gov.in/Home.aspx>



VOCATIONAL PAPER
FOOD AND NUTRITION SKILLS

Year	Semester	Course Code	Name of Course	Credit
1	I	HSC/V/UG001	Food and Bakery Science	03
	II	HSC/V/UG002	Value added products from fruits and vegetables	03
2	III	HSC/V/UG003	Food Standard and Quality Control	03
	IV	HSC/V/UG004	Hands on Training on Bakery / Food Preservation and Processing Centres	03

BA I Semester

Food and Bakery Science

Unit -1

Introduction to bakery –

Ingredients used in bakery products. Introduction of bakery machineries, scope of bakery processing.

Unit -2

Bakery and confectionary raw material-

- a. Cereals- Structure of cereal grain, type of flour.
- b. Sugar
- c. Fats
- d. Milk and milk product
- e. Salt, spices and flavouring
- f. Yeast
- g. Egg, structure of egg, uses of egg in bakery
- h. Flavours and colours.
- i.

Unit -3

Breads- a. Principles of bread making

- b. Simple yeast bread
- c. Role of each ingredient in bread making
- d. baking temperature and its importance.

Unit- 4

Cake making methods-

Creaming method, whisking method, flour batter method, sugar batter method, all in one method and characteristics of good cake.

Answer



BA II Semester

Value added products from fruits and vegetables

Unit-I

Principles and methods of preservation: Processing & Preservation by application of heat (blanching, pasteurization and sterilization).

Unit – 2

Chemicals preservatives, drying, addition of sugar. Refrigeration and freezing. Food spoilage - causes.

Unit- 3

Minimal processing of fruits and vegetables: Methods, packaging and storage of minimally processed products. Fruit juices: extraction, clarification, preservation and packaging.

Unit – 4

Types of fruit juice and beverages, their classification, viz juices, nectars, squashes, crushes, cordials, syrups. Methods of preparation, flow charts, packaging, storage, and spoilage of pickles and spoilage and packaging.

BA III Semester

Food Standard and Quality Control

Unit 1

Meaning of quality, quality factors in food: Appearance, textural factors, flavour factors and other factors. Quality standards, assurance and factors affecting quality.

Unit 2

Methods and techniques for assessment of food quality: Sensory evaluation and Objective evaluation.

Unit 3

Quality control: Basic fundamentals for quality control.

Unit 4

Food standards, food laws and regulation: Prevention of Food adulteration act, Misbranding, Bureau of Indian Standards, Ag Mark standard, Inspection Act, ISO, FSSAI.

B A IV Semester

Hands on Training on Bakery / Food Preservation and Processing Centres

- Minimum fifteen days training at any Bakery/ Food preservation centres or companies (Or)\
- Fifteen days Lab Practical
- Maintain File
- Satisfaction certificate by Training Centres or Subject teacher

A. Khan

