

Sri Dev Suman Uttarakhand University
Badshahithaul (Tehri Garhwal)
B.Sc. Home Science
Proposed syllabus (Semester System- 2018)

Semester 1		
Course code	Name of course	Marks
B.Sc. (H-001)	Principles of Human Nutrition (T)	80(External) & 20 (Internal)
B.Sc. (H-002)	System Dynamics and Management of Resources (T)	80 (External) & 20 (Internal)
B.Sc. (H-003)	Fundamentals of Clothing and Textiles (T)	80 (External) & 20 (Internal)
B.Sc. (H-004)	Fundamentals of Clothing and Textiles (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-005)	Elementary Human Physiology (T)	80 (External) & 20 (Internal)
B.Sc. (H-006)	Elementary Human Physiology (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-007)	Human Development (T)	80 (External) & 20 (Internal)
B.Sc. (H-008)	Communication and Instructional Technology(T)	80 (External) & 20 (Internal)
B.Sc. (H-009)	Communication and Instructional Technology (Practical)	40 (External) & 10 (Internal)

Semester 2		
Course code	Name of course	Marks
B.Sc. (H-010)	Food Science, Processing and storage.	80 (External) & 20 (Internal)
B.Sc. (H-011)	Fashion Studies	80 (External) & 20 (Internal)
B.Sc. (H-012)	Fashion Studies (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-013)	Food Preservation (T)	80 (External) & 20 (Internal)
B.Sc. (H-014)	Food Preservation and processing (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-015)	Life Span Development-I (T)	80 (External) & 20 (Internal)
B.Sc. (H-016)	Fundamentals of Interior Decoration (T)	80 (External) & 20 (Internal)
B.Sc. (H-017)	Fundamentals of Interior Decoration (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-018)	General English(T)	80 (External) & 20 (Internal)

Semester 3		
Course code	Name of course	Marks
B.Sc. (H-019)	Nutrition: A life cycle approach (T)	80 (External) & 20 (Internal)
B.Sc. (H-020)	Nutrition: A life cycle approach(Practical)	40 (External) & 10 (Internal)
B.Sc. (H-021)	Fundamentals Textile Designingand Finishes (T)	80 (External) & 20 (Internal)

B.Sc. (H-022)	Fundamentals Textile Designing and Finishes (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-023)	Housing and Space management(T)	80 (External) & 20 (Internal)
B.Sc. (H-024)	Housing and Space management (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-025)	Life Span Development- II	80 (External) & 20 (Internal)
B.Sc. (H-026)	Therapeutic Nutrition and Dietetics – I (T)	80 (External) & 20 (Internal)
B.Sc. (H-027)		80 (External) & 20 (Internal)

Semester 4		
Course code	Name of course	Marks
B.Sc. (H-028)	Therapeutic Nutrition and Dietetics -II (T)	80 (External) & 20 (Internal)
B.Sc. (H-029)	Therapeutic Nutrition and Dietetics-II (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-030)	Child Psychology (T)	80 (External) & 20 (Internal)
B.Sc. (H-031)	Personal Finances and Consumer Studies (T)	80 (External) & 20 (Internal)
B.Sc. (H-032)	Entrepreneurship Development (T)	80 (External)& 20(Internal)
B.Sc. (H-033)	Early childhood education and methods of child study (T)	80 (External) & 20 (Internal)
B.Sc. (H-034)	Early childhood education and methods of child study(Practical)	40(External) & 10 (Internal)

B.Sc. (H-035)	Traditional Indian Textiles (T)	80 (External) & 20 (Internal)
B.Sc. (H-036)	Food Service Management (T)	80 (External) & 20 (Internal)
B.Sc. (H-037)	Food Service Management (Practical)	40 (External) & 10 (Internal)

Semester 5		
Course code	Name of course	Marks
B.Sc. (H-038)	Community Nutrition- I (T)	80(External) & 20 (Internal)
B.Sc. (H-039)	Information, Education and Communication materials for development (T)	80 (External) & 30 (Internal)
B.Sc. (H-040)	Information, Education and Communication materials for development (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-041)	Process in Apparel Design (T)	80 (External) & 20 (Internal)
B.Sc. (H-042)	Process in Apparel Design (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-043)	Children with Special Needs (T)	80 (External) & 20 (Internal)
B.Sc. (H-044)	Children with Special Needs (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-045)	Introduction to extension education and participatory approaches (T)	80 (External) & 20 (Internal)

Semester 6		
Course code	Name of course	Marks
B.Sc. (H-046)	Community Nutrition- II (T)	80 (External) & 20 (Internal)
B.Sc. (H-047)	Community Nutrition- II (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-048)	Food Standard and quality control (T)	80 (External) & 20 (Internal)
B.Sc. (H-049)	Diffusion and Homestead Technology (T)	80 (External) & 20 (Internal)
B.Sc. (H-050)	Diffusion and Homestead Technology (Practical)	40 (External) & 10 (Internal)
B.Sc. (H-051)	Retailing and Merchandising (T)	80 (External) & 20 (Internal)
B.Sc. (H-052)	NGO management and CSR (T)	80 (External) & 20 (Internal)
B.Sc. (H-053)	Work study and ergonomics (T)	80 (External) & 20 (Internal)
B.Sc. (H-054)	Work study and ergonomics (Practical)	40 (External) & 10 (Internal)

B.Sc.(H-001) - Principles of Human Nutrition

S No	Course outline
Unit I	Terms and definitions used in nutrition History of nutrition and important landmarks Classification and functions of food
Unit II	Macro nutrients (i) Carbohydrates: Types of carbohydrates in food, digestion, metabolism and functions of carbohydrates, Health conditions affected by carbohydrates.

	<p>(ii) Lipids: Types of lipids in foods, digestion, metabolism and functions of lipids, Health problems associated with lipids</p> <p>(iii) Proteins: Amino acids as building blocks of proteins, classification, structure of protein, metabolism and functions of protein, Health conditions affected by carbohydrates.</p> <p>(iv) Energy source: Dietary carbohydrates, proteins, fats and alcohol. three basic functions of energy, basal metabolic rate, physical activity and thermogenesis and factors influencing them.</p>
Unit III	<p>Micronutrients</p> <p>Vitamins: Requirement, sources, function, toxicities and signs and symptoms of deficiencies of: Fat soluble vitamins; water soluble vitamins</p>
Unit IV	<p>Minerals: Requirement, sources, functions, deficiencies and toxicities</p> <p>Water its metabolism, sources, distribution of water, structural and regulatory functions</p>

Recommended readings:

- Wilson E D, Fisher K H and Garcia P A 1980 Principles of Nutrition. Jhon Wiley & Sons, NewYor
- Bamji M S ; Rao P N and Reddy V; 1997 Textbook of Human Nutrition. Oxford and IBH Publishing Co.

BSc. (H 002) System Dynamics and Management of Resources

S No	Course outline
Unit I	<p>Rural households and farms as ecosystem:</p> <p>Systems approach to management.</p> <p>System concept applied to households: definition and meaning of family and household</p>

	<p>Family management system in a changing world: family's adoption to changing resource environment and implications for quality of life of rural-urban families.</p> <p>Factors affecting management of resources in urban-rural home/household</p> <p>Stages of family life cycle</p>
Unit II	<p>Resource classification, availability, generation and allocation</p> <p>a) Role and scope of resources</p> <p>b) Classification and characteristics of resources, national and global, human and material, economic and non-economic.</p> <p>c) Time and Energy as resources</p> <p>Principles in the use of resources; scarcity, utility, accessibility, exchange, transferability, substitution, reuse and investing.</p>
Unit III	<p>Definition, concept and process of management</p> <p>Motivation for management – values goals and standards and their origin</p> <p>classification, role in management, interlinking of values goals and standards</p>
Unit IV	<p>Decision making</p> <p>Role and scope, Classification- technical, economic, social, legal, political decision</p> <p>Decision making process</p> <p>Decision conflict</p>

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Recommended readings:

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

BSc. (H 003) Fundamentals of Clothing and Textiles

Unit I	<p>Textile fibres and their properties</p> <p>Primary and secondary properties of textile fibres with reference to their effect on fibre characteristics, structure of fibres</p> <p>Classification of fibres</p> <p>Origin, production, manufacturing and properties of various fibres: Natural-cotton, linen, jute, hemp, ramie, wool, silk, asbestos. Man-made-rayon, polyester andnylon.</p>
Unit II	<p>Basic principle of yarn making: Mechanical spinning (cotton system, wool system, worsted system), Chemical spinning (wet, dry and melt)</p> <p>Types of yarns: Staple, Filament, Simple, complex</p> <p>Properties of yarns: Yarn numbering systems and twist</p> <p>Textured yarns: Classification, manufacture and properties</p>

Unit III	Weaving: Its principles and basic weaves, parts and functions of the loom Weaves : Classification, construction, characteristics and usage
Unit IV	Knitting: Classification, construction, characteristics and usage Non woven and felts-construction, properties and usage

BSc. (H 004) Fundamentals of Clothing and Textiles Practical

- **Hand loom: Parts, Accessories and their use.**
- **Fibre Identification tests –Visual, burning, microscopic and chemical**
- **Collection of natural, manmade and synthetic fibre/fabric samples.**
- **Yarn Identification – Single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn**
- **Weaves- Identification, representation in graphs and collection of samples.**
- **Knitting- Knitting machine and its parts; accessories and their use.**
- **Identification and collection of knitting samples.**

Recommended readings:

- Cobman, P.B (1985) Textiles Fibre to Fabrics. 6th edition Mc Graw Hill Book Co, US.
- Sekheri S, (2013) Text book of Fabric Science, Fundamentals to finishings PHI Learning, Delhi.

BSc. (H 005) Elementary Human Physiology

Unit I	Introduction to Human body: Organs, tissue and cell, cell structure, cellular organelles and their functions. Introduction to blood and lymphatic system, endocrine system (in brief)
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Unit II	Cardiovascular system: Structure of heart, circulations, cardiac output (Definition and factors affecting), blood pressure (Definition and factors affecting)
Unit III	Digestive system Overview of the Gastrointestinal Tract, organization and functions. Structure and functions of: Stomach, Liver, Gallbladder, Pancreas
Unit 4	Excretory System: <ul style="list-style-type: none"> • Structure and functions of kidney and nephrons.

BSc. (H 006) Elementary Human Physiology (Practical)

- Identification of Elementary tissues.
- Recording pulse rate, heart sound and blood pressure measurement.
- Visit in nearby pathology lab to observe the determination of blood group and haemoglobin.
- Visit to nearby hospital/primary health centre /anganwadi centres to examine first aid in wounds, shock, burn, heat bite, artificial respiration and bed making for the patient.

Recommended readings:

- Auther, J. Vendors, Human Physiology Mechanism of body function McGraw Hill Book Co.

BSc. (H 007) Introduction to Human Development

S No	Course outline
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Unit I	Importance of Human Development from a Life-span perspective. Issues in Human Development. Stages of Human Development
Unit II	Determinants of development; biological and environmental; Principles of Growth and Development: Norms and Milestones Definition of growth and development, difference between growth and development, factor affecting development, Areas of development
Unit III	Methods of Studying Human Development, steps of studying behavior scientifically, non-experimental and experimental studies, naturalistic studies; clinical studies; cross-sectional and longitudinal designs
Unit IV	The psychology of behaviors: definition of psychology; meaning of sensation; perception; concept formation; imagination and creativity; attention and memory; remembering and forgetting; intelligence-reasoning and thinking; motivation and learning

Recommended readings:

- Papalia DE and Olds SW; 1978 Human Development. McGraw Hill. New York
- Munsinger H.; 1971 Fundamentals of Child Development. Holt Reinhart and Wilson Inc.
- Hall, Calvin S. and Lindsey G 1978 Theories of Personality; Jhon Wiley & Sons

BSc. (H 008) Communication and Instructional Technology

Unit 1	Concept of Communication- Meaning, function, problem and barrier Elements of communication process
Unit 2	Communication media- meaning, classification, advantages and limitations Non-projected communication aids chalkboard, flat pictures, diagrams, photographs, charts, posters, flash cards

Unit 3	Three dimensional communication aids specimen, objects and models Projected communication aids- transparencies and slides
Unit 4	Electronic communication aids (Radio and T.V) Instructional Technology- meaning, importance, scope, selection, use and classification

BSc. (H 009) Communication and Instructional Technology

- **Preparation and use of instructional media: Chart, Poster, Flash cards, Graphs, Flannel graphs, models, use of black board, use of bulletin board.**
- **Preparation and use of slides.**
- **Use and handling of instruction aids overhead projector/slide projectors/ camcorder/tape recorder and public-address system.**
- **Demonstration as instructional technology.**
- **Organizing and participating in various types of group discussions.**
- **Lesson planning, presentation and evaluation**

Recommended readings:

- Dhama Barker, L. (1990). "Communication", New Jersey: Prentice Hall, Inc.
- Dhama, O.P. and Bhatnagar O.P. Education and communication for development (1985) Oxford and IBH Publishing Co. Pvt, New Delhi.
- Devito, J. (1998) Human Communication. New York: Harper & Row.
- Patri and Patri (2002); Essentials of Communication. Greenspan Publications
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SECOND SEMESTER

BSc. (H 010) Food Science, Processing and storage

Unit I	<p>Definition and scope of food science</p> <p>Structure, composition, Products, nutritional contribution, selection and changes during cooking of the following food group: cereals, pulses, vegetables and fruits,</p>
Unit II	<p>Structure, composition, Products, nutritional contribution, selection and changes during cooking of the following food group: milk and milk products; meat, fish, poultry and eggs; nuts and oils; spices and condiments; sugar and jaggery</p>
Unit III	<p>Processing of cereals, millets and legumes by traditional and unconventional methods.</p> <ul style="list-style-type: none"> i) Changes in nutritional quality as affected by pounding and milling ii) Puffing and flaking, cooking, parboiling iii) Fermentation, sprouting, malting <p>Processing of oil seeds for extraction of oil and use of oilseed cakes in human nutrition</p>
Unit IV	<p>Traditional methods for storage of grains viz cereals, millets legumes and oilseeds: limitations, losses in nutrition quality as influenced by insect and fungal infestation.</p> <p>Current strategies for storage of food grains at national and international level.</p>

Unit I	<p>Importance of clothing</p> <ul style="list-style-type: none"> • Clothing functions and theories of origin • Clothing terminology • Selection of clothes for different age, climate, personality, sex, and occasions • Selection and Evaluation of ready-made garments
Unit II	<p>Fashion</p> <ul style="list-style-type: none"> • Fashion terminology • Fashion cycle • Sources of fashion • Factors favouring and retarding fashion • Fashion Forecasting-Seasons, sources, steps in forecasting
Unit III	<p>Adoption of fashion</p> <ul style="list-style-type: none"> • Consumer groups- fashion leaders, followers • Adoption process- Trickle-down theory, Trickle across theory, bottom up theory
Unit IV	<p>Fashion centres and designers of the world</p> <ul style="list-style-type: none"> • Role of designer

	<ul style="list-style-type: none"> • Fashion centres and leading designers <p>Design</p> <ul style="list-style-type: none"> • Elements and principles of design • Structural and applied design
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BSc. (H 012)Fashion studies (Practical)

- **Human body: basic introduction, body form in totality, proportion theories in relation different age and sex.**
- **Flat sketching of a garment and creation of styles according to age, season and occasion**
- **Fashion forecast study**
- **Analysis of fabric and trims sourced from various fashion retail stores**
- **Study of collections of famous designers**

Recommended readings:

- Brown, Patty, Rice J., 1998, Ready to Wear Apparel Analysis. Prentice Hall
- Marshall S G, Jackson H O, Stanley MS, Kefgen M &Specht T, 2009, Individuality in Clothing & Personal
- Appearance, edition, Pearson Education, USA Tate S.L., Edwards M.S., 1982, The Complete Book of Fashion Design, Harper and Row Publications, New York.
- Corbman, P.B., (1985) Textiles- Fiber to Fabric, Gregg Corbman, P.B.,

BSc. (H 013) Food Preservation (T)

Unit I	Concept and significance of food preservation; need, benefits and aims
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	Food deterioration, causes of food spoilage, factors affecting it and control of microorganism, enzymes and other factors, Selection and purchase of fruits and vegetables for preservation
Unit II	Principles and method of food preservation <ul style="list-style-type: none"> • Principles and methods of food drying and concentration- sun drying, freeze drying, spray drying, drying by osmosis, factors in control of drying • Preservation by the use of heat- Sterilization, pasteurization, blanching and canning. • Preservation by cold- Distinction between refrigeration and freezing; freezing preservation- air freezing, quick freezing, slow freezing, cryogenic freezing
Unit III	Preservation by use of chemical preservatives, salt, sugar and other additives Principles of food preservation by irradiation and refrigerated gas storage of various foods.
Unit IV	Storage stability of preserved products, objective test of quality of stored like odour, texture etc. Effect of food preservation on nutritive value of food. Enhancing nutritional quality of the food Fermentation: role of microorganism and benefits of fermentation. Sprouting, food fortification, supplementation and enrichment.

BSc. (H 014) Food Preservation and Food Science (Practical)

- **Preparation of fruit juices/ squashes/ syrup.**
- **Preparation of jams/ jellies/ sauces/ chutney/ murabbas.**
- **Preparation of dehydrated vegetables and fruit toffees**
- **Preparation of pickles, cereals/ legume product using food preservation and processing techniques.**
- **Preparation of weaning mix through sprouting, malting using indigenous food crops.**
- **To prepare food products using fermentation/sprouting methods.**

- Visit to food factory/ women self-help group working on areas of food preservation.

Recommended readings:

- Manay, Sakuntala and Shadaksharaswamy, M. (2001). Food Facts and Principles, 2nd edition. New Age International Publishers.
- Srilakshmi, B.(2001). Food Science. New Age International Publishers.
- Potter, N.N. and Hotchkiss, J.H., (1996). Food ScienceVth ed. CBS Publishers, New Delhi.

BSc. (H 015) Life Span Development

Unit I	Prenatal development stages: genetic and environment factors.
Unit II	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
Unit III	Early childhood years: Development miles stones of and antecedent influences in physical and motor, social, emotional, cognitive and language development, play activities.
Unit 4	Middle childhood age Physical and motor skills, developmental factors, language and intellectual development. Emotional development, influence of positive and negative emotions; factors influencing emotions, social and moral development. The function of family, school and community in the growth of children during middle childhood.

Recommended readings

- Berk, L. E. (2007). Development through the lifespan. Delhi: Pearson Education
- Rice, F. P. (1998). Human Development: A lifespan approach. New Jersey: Prentice Hall.
- Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata. McGraw-Hill.
- Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient Black Swan.

B.Sc. (H-016) Fundamentals of Interior Decoration

Unit I	Elements of art: line, shape and form, texture, space and lighting Colour, properties of colour, hue, value and intensity, colour scheme. Principles of design and application in home
Unit II	Furniture: types of material, selection and arrangement, wall and wall coverings, floor and floor covering
Unit III	Window and window treatment, Accessories for interior, flower arrangement
Unit IV	Table setting, lighting as an element of interior

B.Sc. (H-016) Art Principles and Interior Decoration (Practical)

- **Development of designs.**
- **Colour wheel and planning colour schemes of different rooms.**
- **Traditional Alpana designs for decoration in rooms/ cards.**
- **Pottery painting and decoration.**
- **Paper cutting for decorating a house for special occasions.**
- **Use of waste materials for making utility/ decorative articles.**
- **Table setting, Napkin folding and flower arrangements.**
- **Visit to an interior decoration site/office to get insights of current trends in the field of interior decoration.**

Recommended readings:

- Dorothy Stepat De Van.(1980). Introduction to Interior Design, Macmillan, N.Y
- Peter Green. 1967. Introducing Surface Painting, Br. Bestford Lt., UK.
- Rowland Hilder. 1966. Starting with water, Colour, Studio Vista, U.K.

- BhawananiEnakshi 1969. Decorative Designs and Craftsmanship of India, B. Taraporenia Sons and Co. Pvt Ltd., Bombay.

B.Sc. (H-018) General English

Unit I	<ul style="list-style-type: none"> • Basic Grammar I Noun, Verbs Pronoun, Number and case; countable and uncountable Prepositions Adjectives Adverbs Prepositional phrases Interrogatives Transformation of sentences Synthesis of sentences
Unit II	<ul style="list-style-type: none"> • Basic Grammar II Time and tense Voice – Active and Passive Speech - Direct and Indirect
Unit III	<ul style="list-style-type: none"> • Basic Grammar III Agreement of subject, verb and pronouns Conjunctions Articles
Unit IV	<ul style="list-style-type: none"> • Creative Writing Composition and comprehension Letter writing, Application writing Writing story from a given outline Report writing

Recommended readings:

- Allen, W. Standard. (1962) Living English Structure, Orient Longmans, London.
- Jones, Daniel (1993) Everyman’s English Pronouncing Dictionary, University Book Stall, New Delhi.
- Jones, Daniel (1970) An Outline of English Phonetics, Arnold, London.
- Sharma, S.D. (1984) A Textbook of Spoken and Written English, Vikas, Delhi.

