SWAMI VIVEKANAND SUBHARTI UNIVERSITY
UGC Approved Meerut
NAAC A
AN ISO 21001: 2018 ORGANIZATION

OFFICE OF THE REGISTRAR
Gp Capt M Yakoob
M-in-D (Retd.), M.Tech.
REGISTRAR
registrar@subharti.org

Ref.No.U-508(i)/SVSU/2025/1562 Date:25.01.2025

NOTIFICATION

It is hereby notified for information of all the concerned that the Academic Council in its 34th meeting held on 25-07-2024 vide resolution No.34(7) has approved the ordinance relating to course curriculum & syllabus of degree of Four Year Degree Program (FYDP) of the following:

Ordinance No.V-126 (B6), relating to B.Sc.-Home Science.

The copies of all above are enclosed and shall be applicable from Academic Session 2024-25 onwards.

This issues with the approval of the Hon'ble Vice Chancellor.

25.01.2025
Registrar

Ref.No.U-508(i)/SVSU/2025/1562 Date: 25.01.2025

Copy forwarded to information of:

1. Hon'ble Vice-Chancellor
2. Controller of Examination
3. Dean-Academics
4. Director-IQAC
5. Dean-Faculty of Arts & Social Sciences (for compliance please)
6. CTO (with a request to upload the ordinance on University website)
7. Additional Registrar-Academics
8. Guard File

25.01.2025
Registrar

SWAMI VIVEKANAND SUBHARTI UNIVERSITY
UGC Approved Meerut
Where Education is a Passion ...

B.Sc. Home Science Syllabus

(2024-2025)

Department of Home Science

Faculty of Arts & Social Sciences

Swami Vivekanand Subharti University

Uttar Pradesh NEP-2020 UG-PG Course Structure Aligned with FYUGP of UGC Table 1: (To be in Effect From 2024-25 Sessions)

(Cumulative Minimum Credits) Required for Award of Certificate/Diploma/Degree			Subject I	Subject II	Subject II	Subject IV	Vocational Skill Enhancement Courses (SEC) with Summer Internship	Co-Curricular Ability/Enhancement Courses (AEC)	Research Project/Dissertation/Internship/Field of survey work	(Minimum Credits) For the Year
			Major (core)	Major (core)	Major (core)	Minor Multidisciplinary	Minor	Minor	Major	
			4/5/6 Credits	4/5/6 Credits	4/5/6 Credits	6 Credits	3 Credits	2 Credits	3/4Credits	
	Year	Sem	Own Faculty	Own Faculty	Own Faculty	Other Faculty	Vocational Skill Enhancement Courses (SEC) with Summer Internship	Co-Curricular Ability/Enhancement Courses (AEC)	Inter/Intra Faculty related to main Subject	
(40) Certificate in Home Science	1	I	Food & NutritionB.ScHS101(3+1)	Communication Concepts & Theories B.ScHS-102(3+1)	Basics of Computer Application(2+2)	English(6)	One course from list of Vocational Courses	First Aid & Basic Health		40
		II	Human Development: I The Early Years B.ScHS201(3+1)	Fundamentals of Resource Management B.ScHS-202(3+1)	Fashion Studies B.ScHS-203 (3+1)		One course from list of Vocational Courses	Human Values & Environment		
(40+40=80) Diploma in Home Science	2	III	Human Development II: Middle Childhood and Adolescence (3+1)	Nutrition: A Life Cycle approach B.ScHS-302 (3+1)	Choose any one DSE-(2+2) Organization and Management of Children's Institutions B.ScHS-303HD Fundamentals of Human Anatomy and Physiology B.ScHS-303FN Media and Cultural Studies B.ScHS-303CE Apparel Design and B.ScHS-303CT Construction Techniques Human Resource Management B.ScHS-303RM	MOOC(IKS)/ Swayam/Value Added	One course from list of Vocational Courses	Physical Education & Yoga		40

		IV	Life Sciences for Home ScienceB.ScHS-401 (3+1)	Personal Finance and Consumer Studies B.ScHS-402(3+1)	Continue with DSE from the stream selected earlier Laws and Policies for Women and Children in India B.ScHS-403HD Food science and Processing B.ScHS-403FN Communication for Development B.ScHS-403CE Pattern making and Construction B.ScHS-403CT Interior Design B.ScHS-403RM	Basic skills in computer B.ScHS-GE1	One course from list of Vocational Courses	Social Responsibility & Community Engagement		
(80+80=120) 3-year UG Degree in Home Science with name of Specialization	**3**	**V**	**Human Development III: Adulthood and AgingB.ScHS-501**	**Dietetics and Public health Nutrition IB.ScHS-502**	Choose any one DSE (2+2) HDCS 1.Children with DisabilitiesB.ScHS-503 A(HD) 2.Childhood in IndiaB.ScHS-503B(HD) FN 1.Nutritional Biochemistry-IB.ScHS-503 A(FN) 1.Social and Cultural Aspects of NutritionB.ScHS-503 B(FN) DCE 1.Gender, Media and SocietyB.ScHS-503A(CE) 2.New Media for ChangeB.ScHS-503B(CE) FAS 1.Fabric ProductionB.ScHS-503A(CT) 2.Understanding FabricsB.ScHS-503B(CT) **RMDA** 1.Entrepreneurship B.ScHS-503 A(RM) Development and Enterprise ManagementB.ScHS-503 B(RM)				**Internship(4)**	**40**

		VI	Traditional Indian Textiles B.ScHS-601	Extension for DevelopmentB.ScHS-602	Space Design and SustainabilityB.ScHS-603	Continue with DSE from the stream selected earlier Choose any one 1.Research Methods in Home Science (3T+1P) B.ScHS-603 A 2.Innovation and Entrepreneurship (0T+4P) B.ScHS-603 B				
Fourth Year										
Apprenticeship/Internship cmbcdded UG degree (Home Science with name of Specialization)	**4**	**12 Months Apprenticeship/Internship through NATS or from equivalent organization/industry/institute**					**1 (40) 1200 hours**			**40**
OR										
(120+40=160) 4-year UG (Honours Degree in Home Science with name of Specialization**)**	**4**	**VII**	**Statistics and Computer Application (3T+1P)**	**Chooseanyoneifrequired** **1.**ResearchMethodsinHomeScience (3T+1P) 1. InnovationandEntrepreneurship(0T+4P) **ContinuewiththreeDSEsfromstreamselectedearlier**(2T+2P) **HDCS** 1. History and Theories of Human Development 2. Human psychology and Methods of Studying Human Development 3.Guidance & Counseling 4..Family Dynamics and Parenthood **FN** 1. Human Physiology 2. InstitutionalFoodManagement 3. Advances in Food Microbiology 4. Advanced Nutritional					**40**

				Biochemistry **DCE** 1. SocialandBehaviourChange Communication 2. Advertising&DigitalMarketing 3. NGOManagement, CSRandFundraising 4. Information&CommunicationTechnologiesforDevelopment **FAS** 1. HistoricCostumes 2. Dyeing,PrintingandFinishing 3. FashionMerchandising 4. GarmentManufacturing **RMDA** 1. HumanFactorsandErgonomics 2. AdvancedInteriorDesign 3. ResourcesandSustainableDevelopment ProjectManagement					
		VIII		**Continuewiththree DSEsfromthe selectedstream** (2T+2P) **HDCS** 1. Advanced Study in Human Development I 2. Child and Human Rights 3. Child Study Techniques 4. Child Welfare Program **FN** 1. Advance Nutrition 2. Food Packaging and Sensory Evaluation 3. Food Science 4. Nutrition for Health & Fitness **DCE** 1. CorporateCommunicationandPublicRelations				**Internship**	

				2. AdvocacyforChange:HealthandEnvironment 3. ProgrammeMonitoringandEvaluation 4. LivelihoodSystemsandSocial Entrepreneurship **FAS** 1. HistoricTextile 2. HomeTextiles 3. TextileConservation SustainabilityinTextilesandApparel **RMDA** 1. ProductDesignandDevelopment 2. MarketingManagementandConsumerBehaviour 3. SustainableBuilt Environment:ConceptsandPractices DesignApplicationandPractices					
				OR					
(120+40=160) 4-year UG Degree (Honours Degree in Home Science Name of Specialization with Research)	**4**	**VII**	**Statistics and Computer Application** **(3T+1P)**	**Chooseanyoneifrequired** **1.**ResearchMethodsinHomeScience (3T+1P) 2. InnovationandEntrepreneurship(0T+4P) **ContinuewiththreeDSEsfromstreamselectedearlier**(2T+2P) **HDCS** 3. History and Theories of Human Development 4. Human psychology and Methods of Studying Human Development 5.Guidance & Counselling 6.Family Dynamics and Parenthood **FN** 3. Human Physiology 4. InstitutionalFoodManagement	**Students who secure 75% marks in the first 6 semesters**			**Dissertation 1 (4)**	

				5. Advances in Food Microbiology 6. Advanced Nutritional Biochemistry **DCE** 3.SocialandBehaviorChangeCommunication 4. Advertising&DigitalMarketing 5. NGOManagement, CSRandFundraising 6. Information&CommunicationTechnologiesforDevelopment **FAS** 3.HistoricCostumes 4. Dyeing,PrintingandFinishing 5. FashionMerchandising 6. GarmentManufacturing **RMDA** 3.HumanFactorsandErgonomics 4. AdvancedInteriorDesign 5. ResourcesandSustainableDevelopment **6.** ProjectManagement					**40**
		VIII		**Continuewiththree DSEsfromthe selectedstream** (2T+2P) **HDCS** 2. Advanced Study in Human Development I 2. Child and Human Rights 3. Child Study Techniques 4. Child Welfare Program **FN** 5. Advance Nutrition 6. Food Packaging and Sensory Evaluation 7. Food Science 8. Nutrition for Health &				**Dissertation 1 (4)**	

				Fitness **DCE** 5. CorporateCommunicationandPublicRelations 6. AdvocacyforChange:HealthandEnvironment 7. ProgrammeMonitoringandEvaluation 8. LivelihoodSystemsandSocialEntrepreneurship **FAS** 7. HistoricTextile 8. HomeTextiles 9. TextileConservation SustainabilityinTextilesandApparel **RMDA** 7. ProductDesignandDevelopment 8. MarketingManagementandConsumerBehaviour 9. SustainableBuilt Environment:ConceptsandPracticesDesignApplicationandPractices					

B.Sc. Home Science I Year, I Semester
FOOD SCIENCE AND NUTRITION

Programme- B.Sc. Home Science	**Year: First**	**Semester:1st**

Course Description:

The course "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 Neutraceuticals (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.

Course Code:B.ScHS-101	**Course Title: Food Science And Nutrition**

Course Objective:

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

Course Outcomes:

1. Summarize and critically discuss and understand both fundamental and applied aspects of Food Science and nutrition.
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 counseling.

Credits: 4+2	**Course Type: DSC**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(60)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Basic Concepts in Food and Nutrition** • Basic terms used in study of food and nutrition	05

	• Understanding relationship between food, nutrition and health • Functions of food-Physiological, psychological and social	
II	**Nutrients** Functions,dietarysourcesandclinicalmanifestationsofdeficiency/excess of the nutrients. • Energy,Carbohydrates,lipidsandproteins • Fatsolublevitamins • Watersolublevitamins • Minerals	25
III	**Food Groups** Structure,composition,products,nutritionalcontribution, selectionand changes during cookingof various food groups. • Cereals and Pulses • Fruits and vegetables • Milk & milk products • Eggs • Meat,poultryandfish • FatsandOils • Spicesandherbs • Beverages	18
IV	**MethodsofCookingandEnhancingtheNutritionalQualityofFoods** Different methodsofcooking andways to improvenutrientretentionor improvenutritional quality. • Dry,moist,fryingandmicrowavecooking • Advantages,disadvantagesandtheeffectofvarious methodsofcookingon foods • Preventinglossesofnutrientduringcooking • ImprovingnutritionalqualityofdietsbyFoodsynergy,Germination,Fermentation,Fortification andGeneticModificationoffoods	12
Practical:	Weightsandmeasures;preparingmarketorderandtablesetting Foodpreparation,understandingtheprincipalsinvolved,nutritionalqualityandportion size: 2. Cereals:Boiledrice,pulao,chapati,paratha-plain/stuffed,poori,pastas 3. Pulses:Whole,dehusked,pulsecurry 4. Vegetables:Drypreparation,vegetablecurry	

	5. Milkpreparations:Kheer,porridge,custard 6. Eggpreparations:Boiled,poached,fried,scrambled,omelettes,eggpudding 7. Soups:Plainandcreamsoups 8. Bakedproducts:cakes,biscuits/cookies 9. SnacksandBreakfastCereals:pakoras,cutlets,samosas,cheela,upma/poha,sandwiches 10. Salads:saladsandsalad dressings	60

Suggested Readings:

1. ChadhaRandMathurP(eds)(2015).Nutrition:ALifecycleApproach.Hyderabad:OrientBlackswan.
2. RekhiTandYadavH(2014).FundamentalsofFoodandNutrition.NewDelhi:ElitePublishingHousePvt Ltd.
3. SrilakshmiB(2014).FoodScience,6thEdition.Delhi:NewAgeInternationalLtd.
4. BamjiMS,KrishnaswamyK,BrahmamGNV(2016).TextbookofHumanNutrition,4th edition.New Delhi: Oxford andIBH PublishingCo. Pvt. Ltd.
5. Byrd-BredbennerC,MoeG,BeshgetoorD,BerningJ.(2013).Wardlaw'sPerspectivesinNutrition,International Edition, 9th edition, New York:McGraw-Hill.
6. SethiP,LakraP.AaharVigyan,PoshanevamSuraksha(Hindi);FirstEd;2015;Delhi:ElitePublishing House(P) Ltd.
7. KhannaK,GuptaS,SethR,MahnaR,RekhiT(2004).TheArtandScienceofCooking:APractical Manual,Revised Edition.New Delhi:ElitePublishingHousePvtLtd.
8. RainaU,KashyapS,NarulaV,ThomasS,Suvira,VirS,ChopraS(2010).BasicFoodPreparation:ACompleteManual,FourthEdition.Hyderabad:OrientBlackSwan.

B.Sc. Home Science I Year, I Semester
COMMUNICATION CONCEPTS AND THEORIES

Programme- B.Sc. Home Science	**Year: First**	**Semester:1st**

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 behavior of people. Communication is an exciting and challenging field of human interaction.

Course Code: B.ScHS-102	**Course Title:Communication Concepts And Theories**

Course Objective:

1. To learn about the concept, nature, and scope of communication.
2. To understand the process of communication with the help of theories, models, and elements of communication.
3. To recognize and appreciate the role of Perception, Empathy, Persuasion, Culture and Listening in communication.
4. To be able to comprehend the various communication transactions and their role in day-to-day life with special reference to public communication.
5. To understand the relationship between culture and communication and its applications in real life settings.

Course Outcomes:

1. Develop a clear understanding of the concepts of human communication.
2. Comprehend the elements and models governing the process of effective communication.
3. Gain understanding about the related concepts of communication such as Perception, Empathy, Persuasion and Listening
4. Understand the various communication transactions as well as the qualities and skills required of an effective public speaker.
5. Appreciate the role and application of factors for effective communication.

Credits: 3+2	**Course Type: Minor**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(45)+Practical(30)

Units	**Topic**	**No. of Lectures**
I	**Communication:CoreConcepts** • Historicalbackground,concept,nature,functions,and scopeofcommunication • Types of Communication – Formal and informal communication;Verbal and Non-verbal communication; Digital and Non-digitalcommunication	08

	• Elementsofcommunication-Source,Message,Channel,Receiver,Feedback, Context, Noise& Effects	
II	**CommunicationModels andTheories** • Models of Communication: Types of models-Linear, Interaction andTransactionmodels,(ModelsbyAristotle,Harold Laswell,Shannon&Weaver,Charles Osgood,Wilbur Schramm,Helical model) • TheoriesofCommunication:MassSociety,Propaganda,LimitedEffects,Individual Difference and PersonalInfluence	11
III	**FactorsforEffectiveCommunication** • Factorsforeffectivecommunication:Definitions,goals andprinciplesof Empathy,Perception, and Persuasion • Listening in Human Communication-Listening process, significance ofgoodlistening,stylesoflistening,barrierstolistening,cultureandlistening,listening theories • Cultureandcommunication-Relationshipbetweencultureandcommunication,signs, symbols and codesin communication	13
IV	**CommunicationTransactionsandLearning** • Levelsofcommunicationtransactions • Public communication- Concept, types, techniques and skills in publicspeaking, qualities of an effective public speaker, overcoming speakerapprehension • Communication,andLearning:LearningasCommunicationProcess,Domainsof Learning. Theories of learning • Audio-VisualAidsincommunication-definitions,functions,classificationincluding EdgarDale's Cone ofExperience • CommunicationforDevelopment-Conceptandapproaches	13
Practical:	1.Exercisestounderstandvisualcommunication:ElementsofArtandPrinciplesof Design 2.Exercisestoexploredimensionsofnon-verbal communication 3.Handsonpracticewithdifferenttypes ofpublicspeaking 4.Exercisesineffectivelisteningskills 5.Exercisesonbuilding empathyforeffectivecommunication 6. AnalysisanddesigningofIECmaterials	30

Suggested Readings:

1. Devito, J. (2012). *Human Communication*. New York: Harper & Row.Barker,L.(1990).*Communication*,NewJersey:PrenticeHall,Inc;171.
2. AnandS.&Kumar,A.(2016).*DynamicsofHumanCommunication*.NewDelhi:OrientBlackSwan.
3. Vivian,J.(1991).*TheMediaofMassCommunication.*PearsonCollegeDiv;11thedition(19March 2012).
4. Patri, V. R. and Patri, N. (2002). *Essentials of Communication*. Greenspan PublicationsBaran,S. (2014). *Mass Communication Theory*.Wadsworth Publishing.
5. Stevenson,D.(2002).*UnderstandingMediaStudies:SocialTheoryandMassCommunication*,SagePublic ations.
6. McQuail, D. (2000). *Mass Communication Theories.* London: Sage Publications.Zeuschner,R.(1997).*CommunicatingToday*.CaliforniaStateUniversity,USA.
7. Punhani & Aggarwal (2014). *Media for Effective Communication.* Elite Publishers, NewDelhi.

B.Sc. Home Science I Year, I Semester
BASIC SKILLS IN COMPUTER

Programme- B.Sc. Home Science	**Year: First**	**Semester:1st**

Course Description:

This course offers a comprehensive introduction to computers, covering their definition, characteristics, and evolution. It includes an overview of system units, input/output devices, and storage options, along with primary and secondary memory. Software types and programming languages are discussed, as well as internet basics, security threats, and authentication methods. The curriculum includes practical training on Windows OS, featuring desktop management, file compression, and antivirus use. It also covers word processing with Microsoft Word, spreadsheet management with Microsoft Excel, and presentation creation with Microsoft PowerPoint. Additionally, students will learn to navigate the internet, use email, search engines, and download files.

Course Code:B.ScHS-GE-1	**Course Title: Basic Skills In Computer**

Course Objective:

1. Demonstrate a basic understanding of computer hardware and software.
2. Demonstrate problem-solving skills.
3. Apply logical skills to programming in a variety of languages.
4. Utilize web technologies.

Course Outcomes:

1. Identify basic terms, concepts, and functions of computer system components.
2. Select and use the appropriate software application to complete a particular task such as word Processing skills to create, save, and modify business documents.
3. Identify basic concepts and procedures for creating, viewing, and managing files, and folders for different operating systems.

Credits: 3	**Course Type: Multidisciplinary**
Max. Marks:	**Min. Passing Marks:**)

Total No. of Lectures: Theory(45)+Practical(30)

Units	**Topic**	**No. of Lectures**
I	**Introduction to Computers** • Introduction to Computers: Definition, Characteristics & Uses • Evolution of computers, System unit (memory, ALU & control unit), • Input / Output devices, Storage devices • Memory- primary & secondary. • Introduction to Software, its type (system, application & utility), Programming languages (machine, assembly & high-level)	10

	• Introduction to Basics of Internet, Security Threat and Security Attack, Malicious Software, Hacking. Users Identifications and Authentication	
II	**Windows and Word Processors** **Windows:** • Introduction to Windows • Features of Windows: Desktop & its components, the window • Application window: various bars • Document window, the dialog window, Icons • Windows explorer: Control panel, setting wallpaper, Screen Saver, Background. • Creating a folder: Compressing/ Zipping files (WinZip), • Virus & Antivirus. **Word processors:** • Introduction to word processing, Features of Word processors, • Working with formatted documents, Shortcut keys. • Finding & replacing text, go to command. • Formatting documents, Selecting text, Formatting characters, changing cases, Paragraph formatting, Indents, Using format painter, Page formatting, Header & footer, Bullets & numbering, Tabs.	13
III	**Microsoft Word** • Starting Word • Creating Documents • Parts of Word Window • Formatting Features • Toolbars and their Icons • Tables	05
IV	**Microsoft-Excel** • Starting MS-Excel • Toolbars & their icons • Selecting Cells • Entering & Editing text • Entering Numbers • Entering cell contents • Formulas • Creating the charts	09
V	**Microsoft- PowerPoint** • Starting PowerPoint • Creating Power Point Presentation • Editing Text on Slide	

	• Formatting Text • Formatting Paragraphs • Checking Text • Using Clip Art Gallery • Develop a Slide Show	08
Practical:	**1. Microsoft Word** • Creating new word document, Open existing document, Save, Print, Page Setup, Close, Exit. • Edit, View, Insert, Format, Tools Menus **2. Microsoft- Power Point** • Starting presentation, Improving presentation, Create Presentation using Auto Content Wizard Using power point Templates, Copying Text, Moving Text, Deleting Text, Aligning Text in a Slide • Changing fonts, Adding Symbols, Using Clip Art Gallery, Animate text and Graphic Object **3. Microsoft- Excel** • Printing & Saving sheets, Entering & Editing text, Page Setup • Edit, Insert, Format, Tools menus **4. Internet** • Opening web page • E-mail • Search Engines • Downloading files from Internet	30

Suggested Readings:

1. Peter Norton, "Introduction to Computers", TMH, 2001.
2. Ed Bott, "Using Microsoft Office 2007", Pearson Education India.
3. John Walkenbach (Author), Herb Tyson (Author), Michael R. Groh (Author),
4. FaitheWempen (Author), Lisa A. Bucki, "Microsoft Office 2010 Bible", Wiley India.
5. Mahapatra & Sinha, "Essentials of Information Technology", Dhanpat Rai Publishing.

B.Sc. Home Science I Year, II Semester

FUNDAMENTAL OF HUMAN DEVELOPMENT

Programme- B.Sc. Home Science	**Year: First**	**Semester:1st**

Course Description: The course introduces students to prenatal development; Neonate & Infant It explains basic developmental principles and psychosocial factors which influence development from conception till 6 years. It further explores the influence of a range of issues from birth through age 6 year.

Course Code:B.ScHS-201	**Course Title: FUNDAMENTAL OF HUMAN DEVELOPMENT**

Course Objective:

- To develop an understanding about the discipline of Human Development
- To gain an insight of development in different domains from conception to early childhood

Course Outcomes:

Aftercompletingthis course,students willbeableto:

1. DevelopanunderstandingaboutthedisciplineofHuman Development
2. Acquireknowledgeofdevelopmentindifferentdomainsfromconceptionthrou ghinfancyandearlychildhood.
3. Understandthesalientfeaturesofhumandevelopmentbygettingacquaintedwit hvariousmethods of studying children.

Credits: 3+2	**Course Type: DSC-1**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(45)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	Unit I: Introduction to Human Development Unit Description: The unit presents the student with an overview of the discipline of Human Development. The student will develop an understanding of basic ideas and terms that are central to the study of Human Development. Subtopics:	05

	●Human Development: Definitions, nature and scope ●Domains and stages of development ●Principles of development Contexts of development	
II	Unit II: Prenatal development and childbirth Unit Description: The unit describes the process of development from conception to birth and elaborates on the hereditary and environmental Influences that play a role in prenatal development. ●Conception and stages of prenatal development ●Influences on prenatal development ●Prenatal care ●Childbirth: Methods and birth complications	10
III	Unit III: Neonate and infant development Unit Description: The unit draws focus to the first two years of life and provides an understanding of the physical-motor, socio-emotional, cognitive and language development of infants. ●Capacities of the neonate ●Infant care practices ●Physical motor development ●Socio-emotional development ●Language development ●Cognitive development	10
IV	Unit IV: Development during early childhood Unit Description: The unit traces the progression in development that occurs from 2-6 years of life. ● Physical Motor Development ● Socio-Emotional Development ● Language Development ● Cognitive Development	10
Practical:	1. Narrative method: recalling and recording an event 2. Exploring cultural practices and traditions during 3. Pregnancy 4. birth 5. Infant care 6. Observation method:observing infants and preschool children in everyday settings, recording the observations 7. Neonatal assessment (APGAR scale and Neonatal reflexes) 8. Multi-media resources to study prenatal development, infancy, early childhood	60

Suggested Readings:

1. ChadhaRandMathurP(eds)(2015).Nutrition:ALifecycleApproach.Hyderabad:OrientBlackswan.
2. RekhiTandYadavH(2014).FundamentalsofFoodandNutrition.NewDelhi:ElitePublishingHouseP vt Ltd.
3. SrilakshmiB(2014).FoodScience,6thEdition.Delhi:NewAgeInternationalLtd.
4. BamjiMS,KrishnaswamyK,BrahmamGNV(2016).TextbookofHumanNutrition,4th edition.New Delhi: Oxford andIBH PublishingCo. Pvt. Ltd.
5. Byrd-BredbennerC,MoeG,BeshgetoorD,BerningJ.(2013).Wardlaw'sPerspectivesinNutrition,Internati onal Edition, 9th edition, New York:McGraw-Hill.
6. SethiP,LakraP.AaharVigyan,PoshanevamSuraksha(Hindi);FirstEd;2015;Delhi:ElitePublishing House(P) Ltd.
7. KhannaK,GuptaS,SethR,MahnaR,RekhiT(2004).TheArtandScienceofCooking:APractical Manual,Revised Edition.New Delhi:ElitePublishingHousePvtLtd.
8. RainaU,KashyapS,NarulaV,ThomasS,Suvira,VirS,ChopraS(2010).BasicFoodPreparation:ACo mpleteManual,FourthEdition.Hyderabad:OrientBlackSwan.

B.Sc. HOME SCIENCE I Year, II Semester

FUNDAMENTALS OF RESOURSE MANAGEMENT

ramme- B.Sc. Home Science	**Year: I**	**Semester: II**

cription: Thefocusofthis course wouldbeonunderstandingtheconcept of management, scope and approaches of manageme cenario.Furtherunitsattempttoacquaintthestudentswiththeavailableresources, their uses and conservationapproaches, as well a in understanding the functions and processes of management in a scientific manner for the optimization of resources and wi n effective management of time and energy resources and their functional use in day-to- day life.

e: B.ScHS-202	**Course Title: Fundamentals of Resource Management**

ective: 1- To enable students to understand the fundamentals of resource management in changing scenario and available res d conservation.

tand the processes of management in a scientific manner for the judicious use of resources.
p the entrepreneurship, employability through skill development in the context of competency.

comes: Studentswill beableto:

prehendthefundamentalsofresourcemanagement inthechangingscenario.
liarizewiththeavailableresources,theirusesandconservation.
zeresourcesoptimallyina prudent manner.
rstandtheprocessesofmanagementinascientificmannerfortheuseofresources.

edit: 5(Theory3;Practical 2)	**Course Type- DSC**
s: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory45periods;Practical30periods

Theory
(Credits 3; Periods 45)

nits	**Topic**	**No of L**
I	**UnitI:Introductiontomanagement** ● Concept,nature,universalityand scopeofmanagement ● Theoriesand Approaches tomanagement. ● Ethicsinmanagement ● Motivationinmanagement	**12**
II	**UNITII:Understandingresources** ● Meaning, classification and characteristics of resources. ● Resource conservation- maximizing use of resources, factors ● affecting utilization of resources. ● Family life cycle in context to resource use: Time, energy, money.	**9**
III	**UnitIII:Functions ofmanagement:An overview** ● Decision Making: Concept, significance and steps involved in decision-makingprocess. ● Planning:Natureandcharacteristics,classificationofplans&stepsinplanning. ● Organizing:Concept,significanceandstepsinvolvedinorganizingprocess. ● Supervision:Typesofsupervision(directing&guiding),factorsofeffectivesupervision.	**12**

		● Controlling:Typesofcontrol,stepsincontrolling,requirementsofeffectivecontrol. ● Evaluation:Typesandstepsof evaluation.	
V		**UnitIV:Managementoftimeandenergyresources** ● Time Management: Concept, tools of time management, types of timeplans,steps in making atime plan. ● EnergyManagement:Concept,principlesofbodymechanics,typesoffatigue. ● WorkSimplification:Techniques,ClassesofChange.	12
			45

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pe, C. (2014). *Introduction to management.* Oxford University Press.
er, P. F. (2007). *Management: Tasks, responsibilities, practices.* Transaction Pub, ISBN-13: 978-0750643894.
S. Ed. (2016). *Management of resources for sustainable development.* New Delhi: Orient Blackswan Pvt. Ltd, ISBN: 9788125063490, 9788125063
n, R. W. (2013). *Management: Principles and practices (11th ed.).* South-Western Cengage Learning, ISBN: 9788131530917, 8131530914.
C. W., & Stevenane. (2006). *Principles of management (1st ed.).* McGraw-Hill/Irwin. ISBN: 9780073530123.
z, H., & O' Donnel, C. (2005). *Management: A systems and contingency analysis of managerial functions.* New York: McGraw-Hill Book Comp
07085 3775.
e, T. J. (2021). *Family resource management* (4th ed.). ISBN-13: 978-1544370620.
V.S.P. (2008). *Principles & practice of management.* Konark Publishers Pvt. Ltd, ISBN- 13: 978-8122000283.
A.(2009). *Principlesof management*.Gennext Publication.ISBN-13: 9789380222127.
er,R.(2009).*Management*.Canada:HoughtonMiffinHarcourtPublishingCompany.

Practical
(Credit 2;Periods 30)

s		Topic		N Lec
		UnitI:IdentificationandDevelopmentofmanagerialcompetencies Activities: MicroLabandWhoamI SWOCanalysis Self Casestudies: Individuals Casestudies:Organizations BuildingDecisionmakingabilities Teambuildingmanagementgames DecisionMaking:CaseAnalysis		
		● Workimprovementusing timeandmotion studytechniques - pathwaychartortravelchart/processchart-observe,record,andanalyzean activity. - pathwaychartortravelchart/processchart-observe,record,andanalyzean activity with improvement.		

eadings:

S. Ed. (2016). *Management of resources for sustainable development.* New Delhi: Orient Blackswan Pvt. Ltd, ISBN: 9788125063490, 9788125063
R., Magu, P., Singh, P., Meghna, Gupta, S.(2013). *Resource Management: An Introductory Manual.* R. Gangadharan of Elite Publishing H
ganj, ISBN No: 978-81-88-901-50-0.

FASHION STUDIES

Programme- B.Sc. Home Science	Year: I	Semester: II

Course Description:

This course provides an introduction to the fundamentals of fashion and the fashion industry, offering a comprehensive understanding of the functions and theories of clothing. Students will explore the role and significance of clothing, learning to identify factors that influence garment selection and evaluation. The course delves into the concept of fashion, its terminology, and the various sources and factors that shape it. Additionally, students will gain awareness of global fashion centers and their impact on the industry. By applying the elements and principles of design, students will develop a keen sensitivity towards garment design and selection, equipping them with essential skills for a career in fashion.

Course Code:B.ScHS-203	Course Title: Fashion Studies

Course Objective:

1. To understand the basics of fashion and the fashion industry.
2. To impart knowledge about functions and theories of clothing.
3. To develop sensitivity towards selection of garments and garment design.

Course Outcomes:

1. Identify the role and functions of clothing and recognize the factors affecting the selection and evaluation of clothing.
2. Explain the concept of fashion, its terminology, sources and factors affecting it.
3. Being aware of global fashion centers.
4. Apply the knowledge of elements and principles in design interpretation.

Credits: 3+2	Course Type: DSC
Max. Marks: 100+50	Min. Passing Marks:40+20

Total No. of Lectures: Theory(45)+Practical(60)

Units	Topic	No. of Lectures
I	Clothes and us	

	● Clothingfunctionsandtheoriesoforigin ● Clothingterminology ● Individualityandconformity,conspicuousconsumptionandemulation ● Bodyshapes ● SelectionandEvaluation ofqualityofready-madegarments ● Selectionofclothesforself	15
II	**Understandingfashion** ● Fashioncycle ● Terminology ● Theoriesoffashionadoption ● Sourcesoffashionresearch ● Factors favoringandretardingfashion ● RoleofaDesigner ● FastFashion:CharacteristicsofFastFashion, FastFashionandConsumer ● SlowFashion:Characteristics,SlowFashionaprocess,importanceofchangingfrom fast to slow fashion.	15
III	**Designin Garments** ● StructuralandDecorativeDesign ● ElementsofDesign ● PrinciplesofDesign	6
IV	**Fashion** ● StructureandFunctioningofFashion Industry ● Forecasting:Fashionseasons ● GarmentCategories ● FashionCenters ● Careersin Fashion	9
Practical:	**1. Preparesamplesof–** a) Basichandstitchesforcreatingaseamandedge finishing, decorativeHandStitches b) Developanup-cycledproduct. **2. Createacollectionofgarmentsforanalysisfrom printandvisualmedia.** a) Analyzethevarious elementsthatcomprise thegarments. b) Identifythevariousprinciplesofdesignusedinthesel ectedgarments	60
Suggested Readings:		

1. Brown,Patty,RiceJ., 1998, *ReadytoWear Apparel Analysis*.PrenticeHall.
2. MarshallSG,JacksonHO,StanleyMS,KefgenM&SpechtT,2009,*IndividualityinClothing&PersonalAppearance, 6thEdition*, PearsonEducation,USA.
3. TateS.L.,EdwardsM.S.,1982,*TheCompleteBookofFashionDesign*,HarperandRowPublications,NewYork.
4. FringesG.S.,1994,*FashionFromConcepttoConsumer,6thedition*,PrenticeHall,NewJersey.
5. R.Andrew,2018,KeyConceptsforFashionIndustry,BloomsburyPublishing,India
6. FringesG.S.,1994,*FashionFromConcepttoConsumer,6thedition*,PrenticeHall,NewJersey.
7. MarshallSG,JacksonHO,StanleyMS,KefgenM&SpechtT,2009,*IndividualityinClothing&PersonalAppearance, 6th Edition*,PearsonEducation,USA.

B.SC. HOME SCIENCE II YEAR/ III SEM

Human Development II: Middle Childhood and Adolescence

Programme- B.Sc. Home Science	**Year: Second**	**Semester: III rd**

Course Description:

The course introduces students to child and adolescent development. It explains basicdevelopmental 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 age18.

Course Code: B.Sc HS 301	**Course Title:Human Development II: Middle Childhood and Adolescence**

Course Objective:

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, early 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.

Course Outcomes:

1. Explain the need and importance of studying childhood and adolescence as a distinctive stage of the life-span.
2. Describe the historical views and theories on childhood and adolescent development.
3. Describe the characteristics, needs and developmental tasks of infancy, early childhood, middle childhood and early and late adolescence.
4. Identify the biological and environmental factors affecting development during

childhood and adolescence.

5. Analyze key issues that influence child and adolescent development.

Credits: 3+2	**Course Type: DSC**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(45)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Introduction: Childhood and Adolescent Development:** • Concept, meaning and principles of 'growth' and 'development'. • Concept of critical periods of development during infancy, childhood and adolescence. • Importance of early stimulation and intervention during early years - evidence from neuroscience research	6
II	**Historical Foundations and Theories of Childhood and Adolescent Development** • Historical foundations and scientific beginnings • Brief overview of theories of child and adolescent development including them at rational, psychodynamic, behavioral psychosocial, cognitive,social learning, ecological, existential/phenomenological, socio-cultural, ethological, socio-biological, and interaction perspectives.	9
III	**Development across Childhood and Adolescence** • 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	10

	milestones of individuals from birth to 18 years are explained. • Neonate (birth–1month) • Infancy (1 month–2years) • Early childhood (2-6years) • Middle childhood (6-11years) • Adolescence (12-18years)	
IV	**Familial and Social Influences on Childhood and Adolescent Development** • Family influences on child and adolescent development • Influence of various parenting styles on development, behaviour 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 • Developmentofgenderrolesandperceptions,changesingenderidentityfromearly childhood through adolescence	10
V	**Childhood and Adolescent Development: Key Issues** • 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	10
Practical:	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.	60

Suggested Readings:

1. Berk, L.E. (2017). *Child development* (9th ed.). Pearson
2. Bhogle,S.(1999).Gender roles: The construct in the Indian context. In T.S. Saraswathi (Ed.),*Culture socialization and human development: Theory, research and applications in India(pp. 278-300)*.New Delhi: Sage.
3. 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.
5. Kumar,K.(1993).Study of childhood and family. In T.S. Saraswathi & B.Kaur (Eds.). *Human development and family studies in India : Anagenda for research and policy, (pp.67-76)*. New Delhi:Sage.
6. Lightfoot, C., Cole, M., & Cole, S. (2012). *The development of children* (7th ed.). New York: Worth Publishers
7. Santrock, J. (2017). *A topical approach to life span development* (9th ed.). New NY.: Mcgraw-Hill Higher Education.
8. Saraswathi,T.S.,&Kaur,B.(1993).HumanDevelopmentandfamilyStudiesinIndia- an Agenda for research and Policy. New Delhi. Sage.
9. Saraswathi, T. &, Meera. (2013). Ecology of Adolescence in India. *Psychological Studies*. DOI 58. 10.1007/s12646-013-0225-7.
10. Saraswathi, T.S., Menon, S., & Madan, A. (eds.) (2018) *Childhoods in India Traditions*,Trends and Transformations. New Delhi. Routledge.
11. Sinha ,& Misra, R.C.(1999).Socialization and cognitive functioning. InT.S.Saraswathi(Ed.),Culture,socialization and human development: Theory ,research and applications in India(pp.167-187).New Delhi: Sage.
12. Verma,S .,&Saraswathi ,T.S. (2002). Adolescence in India :Street urchinsor Silicon Valley millionaires? In B. B. Brown, R. W. Larson & T. S. Saraswathi (Eds.), The world's youth: Adolescence in eight regions of the globe (p. 105–140). Cambridge University Press.https://doi.org/10.1017/CBO9780511613814.005

B.SC. HOME SCIENCE II YEAR/ III SEM
Nutrition: A life cycle approach

Programme- B.Sc. Home Science	**Year: Second**	**Semester: III rd**
Course Description: This course provides a comprehensive overview of nutrition across the life cycle, focusing on key concepts such as macronutrients, micronutrients, and dietary guidelines. Students will learn about specific nutritional requirements during pregnancy, infancy, childhood, adolescence, adulthood, and older adulthood. Practical components include hands-on experience in meal planning, dietary assessment, and real-life application of knowledge through field visits and case studies.		
Course Code: BSc HS 302	**Course Title:Nutrition: A life cycle approach**	
Course Objective: 1. Understand the importance of nutrition across the life cycle. 2. Identify and analyze nutritional requirements during different life stages. 3. Develop practical skills in meal planning and dietary assessment. 4. Apply knowledge of nutrition to address specific health issues and conditions.		
Course Outcomes: 1. Demonstrate knowledge of macronutrients, micronutrients, and dietary guidelines. 2. Evaluate nutritional needs during pregnancy, infancy, childhood, adolescence, adulthood, and old age. 3. Apply practical skills in meal planning, dietary assessment, and nutritional counseling. 4. Utilize nutrition knowledge to develop personalized nutrition plans for individuals with specific health conditions or dietary requirements.		
Credits: 3+2	**Course Type: DSC**	
Max. Marks: 100+50	**Min. Passing Marks:40+20**	

Total No. of Lectures: Theory(45)+Practical(60)		
Units	**Topic**	**No. of Lectures**
I	**Introduction to Nutrition** • Overview of nutrition and its importance in human health. • Basic concepts of macronutrients and micronutrients. • Dietary guidelines and recommendations.	5
II	**Nutrition during Pregnancy and Lactation** • Nutritional requirements during pregnancy and lactation • Effects of maternal nutrition on fetal development	10
III	**Nutrition in Infancy and Childhood** • Nutritional needs of infants and children. • Introduction to breastfeeding and complementary feeding. • Common nutritional issues in children.	10
IV	**Nutrition in Adolescence and Adulthood** • Nutritional requirements during adolescence and adulthood. • Eating disorders and their impact on health.	10
V	**Nutrition in Older Adults** • Nutritional challenges faced by older adults • Age-related changes in metabolism and nutrient absorption	10
Practical:	1. Meal planning for pregnant and lactating women. 2. Assessing dietary intake and making recommendations. 3. Designing nutrition plans for elderly individuals. 4. Hands-on experience in meal planning, dietary assessment, and nutritional counselling. 5. Field visits to community nutrition programs or healthcare facilities.	60

Suggested Readings:

1. Child Nutrition and Health by P. S. Surjeet Singh
2. Nutrition for Health and Healthcare & by Debasish Basu
3. Geriatric Nutrition: The Health Professional's Handbook by Ronni Chernoff

B.SC. HOME SCIENCE II YEAR/ III SEM

Organization and Management of Children's Institutions

Programme- B.Sc. Home Science	Year: Second	Semester: III rd

Course Description:

This course provides a comprehensive overview of nutrition across the life cycle, focusing on key concepts such as macronutrients, micronutrients, and dietary guidelines. Students will learn about specific nutritional requirements during pregnancy, infancy, childhood, adolescence, adulthood, and older adulthood. Practical components include hands-on experience in meal planning, dietary assessment, and real-life application of knowledge through field visits and case studies.

Course Code: BSc HS 303(HD)	Course Title:Organization and Management of Children's Institutions

Course Objective:

1. To comprehend the importance of services, institutions and programmes needed for children
2. To understand the aspects involved in management of children institutions and programmes
3. To develop sensitivity towards the individual needs of children
4. To develop an orientation towards planning developmentally and contextually appropriate activities for children

Course Outcomes:

1. Recognize the importance of providing services, programmes and institutions for children.
2. Describe the aspects involved in the management of children's institutions

3. Demonstrate an understanding of individual children's needs and develop appropriate activities for them
4. Identify challenges and opportunities while working in children's institutions

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Importance of children's institutions** Students will understand the purpose of setting up children's institutions, the types of institutions and how to conduct need assessment for such institutions. • Need/purpose for institutions for children • Types of children's institutions- based on philosophy, context, and funds and resources in the country • Significance of developmentally and contextually appropriate programmes for children • Need Assessment- Situational Analysis, Baseline surveys, Resource Mapping	6
II	**Management of children's institutions** Students will be able to develop an understanding of the process involved in the management of children's institutions. • Planning and Organizing: Philosophy, concept, nature, goals and characteristics, steps in planning, services to be offered, organizing infrastructure and layout, maintenance, and emergency measures • Developing the resources and services for the set-up - finance and budgeting, personnel- both managerial and staff (hiring, salary, creating supportive work environments, capacity building), infrastructure and equipment), enrolment of children. • Supervision and monitoring: Types, factors, steps and requirements of effective supervision and monitoring • Assessment and evaluation: Importance, types and steps; evaluation of the programme, curriculum, staff, and facilities according to the	12

	developed standards. • Challenges in managing children's institutions and how to overcome them	
III	**Organizing programmes for children** • Approaches to programme planning through selected case studies • Using indigenous and local knowledge for planning and creating developmentally and contextually appropriate activities for children • Ensuring and creating safe and productive spaces for children, importance of play • Monitoring, assessment and evaluation of programmes and children (records and registers) • Partnering with community and parents	12
Practical:	1. Visit to selected institutions working with children 2. Needs assessment: Survey of locality and community (questionnaire) 3. Community–baseline survey for programme development (interview/questionnaire) 4. Developing checklists: Developmental norms for children, requisites of a good institution 5. Case study of a private/government/non government children's institutions 6. Placement/internship: Identifying needs and developing activities for all domains of development and undertaking developmentally appropriate activities within existing organizations 7. Programme planning and assessment with the help of an organization 12 8. Envisage a small project working in a group in collaboration with an existing organisation Execute the project with special emphasis on individual/ group empowerment 9. Plan an outline/layout of setting up an institution on the basis of internship or fieldwork done	60

Suggested Readings:

1. Chandra, P. (1995). Projects – Planning, Analysis, Selection, Implementation and Review. New Delhi: Tata McGraw
2. Hart, R.A. (1997). Children's Participation: The Theory and Practice of Involving Young Children in Community Development and Environmental Care.
3. Hildebrand, V. (1984). Management of Child Development Centres, New York: Collier Macmillan
4. Jayakaran, R.L. (1996). Participatory Learning and Action: Users' Guide and Manual. Madras: World Vision India

5. Montgomery, H. (Ed.). (2013).Local childhood, global issues. UK: The Policy Press. Suggested readings
6. Kretzmann, J.P. & McKnight, J.L. (1993). Building Communities from the Inside Out: A Path Toward Finding and Mobilizing a Community's Assets Paperback ACTA Publications
7. Sriram, R. (2014). Engaging in Social Intervention (For Learners) Volume I. New Delhi: Concept Publishing.
8. Sriram, R. (2014). Engaging in Social Intervention (For Mentors) Volume II. New Delhi: Concept Publishing
9. Udayan Care (2017). Standard of Care in Child Care Institutions, A Series on Alternative Care. https://www.udayancare.org/sites/default/files/Standards_of_Care.pdf)
10. IGNOU. (2017). Unit-3 Organizations for Children, Block-1 Theory and Practice in Early Childhood Care and Education. http://hdl.handle.net/123456789/34219 IGNOU. (2017). Unit-4 Procedure for Establishing and Running Social Service Organisation, Block II Social welfare administration. http://egyankosh.ac.in//handle/123456789/17235
11. Vikaspedia. (n.d). Objectives and approaches to Child Care institutions, https://vikaspedia.in/education/child-rights/living-conditions-in-institutions-forchildren-in-conflict-with-law/objectives-and-approach-of-child-care-institutions
12. Vikaspedia. (n.d). Roles and Responsibilities of Staff in CCI. https://vikaspedia.in/education/child-rights/living-conditions-in-institutions-forchildren-in-conflict-with-law/roles-and-responsibilities-of-staf

B.SC. HOME SCIENCE II YEAR/ III SEM

Fundamentals of Human Anatomy and Physiology

Programme- B.Sc. Home Science	Year: Second	Semester: III rd

Course Description:

This course provides a comprehensive understanding of human biology, covering cellular structure, nervous, endocrine, digestive, respiratory, circulatory, excretory, muscular, and reproductive systems. It also includes hands-on practical skills like using microscopes, analyzing blood components, measuring vital signs, and understanding tissue histology. The course emphasizes both theoretical knowledge and practical applications in human physiology.

Course Code: BSc HS 303(FN)	Course Title: Fundamentals of Human Anatomy and Physiology

Course Objective:

1. Advance their understanding of some of the relevant issues and topics of human physiology.
2. Enable the students to understand the integrated function of all systems and the grounding of nutritional science in physiology.
3. Understand alterations of structure and function in various organs and systems in disease conditions.

Course Outcomes:

1. Enabled with knowledge about the human body and assess the normal functioning of all the organ systems of the body and their interactions.
2. Knows the proper working of specific organ and related hormone
3. Has the knowledge of physiology of body in their life routine.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Cell and Muscle structure & Human Eye and Ear** • Cell- structure and functions, cell size, cell shape, types of cell, cell theory, plant and animal cell, brief review of cell organelles. • Muscle system- structure and function of muscles and connective tissue. • Review of structure and function- Human eye and ear.	5
II	**Introduction to Glands, Body Systems- Digestive and Respiratory** • Endocrine glands and exocrine glands- structure, function, role of hormones. • Digestive system- structure and function, role of liver, pancreas and gall bladder. • Respiratory system- structure and functions, role of lungs in the exchange of gases.	9
II I	**Circulatory, Nervous and Immune System** • Circulatory system- structure and function of heart, blood pressure, composition of blood, blood groups. • Nervous system- nerve, nerve impulse, neuron, synapse, CNS, Afferent and Efferent nerve, Blood-brain barrier, Hypothalamus. • Immune system- cell mediated and acquired immunity, plasma proteins.	10
I V	**Excretory and Reproductive System** • Excretory system- structure and function of kidneys, Nephron, urine formation and composition, osmo-regulation, renal failure and artificial kidney. • Reproduction- male and female reproductive organs,	6

	ovulation, spermatogenesis, menstrual cycle, concep implantation, placenta, birth, concept of twins.	
Practical:	1. Microscope and itsuses 2.Histology of epithelial, connective, muscular and nervous tissues. 3.Find out RBC and WBCcount 4.Determination of pulse rate in resting condition and after exercise (30 beats/10 beatsmethod) Determination of blood pressure by Sphygmomanometer (Auscultatormethod). 5.Measurement of Peak Expiratory flowrate. 6.Determination of Bleeding Time (BT) and Coagulation Time(CT). 7.Detection of Blood group (Slidemethod). 8.Measurement of Hemoglobin level (Sahli`s or Drabkinmethod).	60

Suggested Readings:

1. Ganong, W.F. (1985): Review of Medical Physiology, 12th Edition, Lange Medical Publication.
2. Moran Campell E.J., Dickinson, C.J., slater, J.D., Edwards, C. R. W and Sikora, K. (1984): clinica Physiology, 5th Edition, ELBS,Blackwell Scientific Publications.
3. Guyton, A.C. and Hall, J.B. (1996): Text Book of Medical Physiology, 9th Edition, W.B. Scanders Company, prism Books (Pvt.) Ltd., Banglore.
4. Jain, A.k.; Textbook of Physiology. Vol. I and II. Avichal publishing Co., New Delhi.

B.SC. HOME SCIENCE II YEAR/ III SEM
Media and Cultural Studies

Programme- B.Sc. Home Science	**Year: Second**	**Semester: III rd**

Course Description:

The Media and Cultural Studies course explores the intersection of media, culture, and society. Students will analyze various forms of media, including film, television, social media, and advertising, through a cultural lens. The course will examine how media shapes and reflects cultural values, identities, and power dynamics. Topics covered include media representation, cultural globalization, media industries, and audience reception. Through critical analysis and theoretical frameworks, students will gain a deeper understanding of the role of media in shaping contemporary culture and society.

Course Code: BSc HS 303(CE)	**Course Title:Media and cultural studies**

Course Objective:

1. Analyze the role of media in shaping cultural identities and practices.
2. Critically examine the relationship between media, culture, and society.
3. Explore theoretical frameworks in media and cultural studies.

Course Outcomes:

1. Demonstrate an understanding of how media influences cultural norms and values.
2. Evaluate media texts and practices within cultural contexts.
3. Apply theoretical concepts to analyze and interpret media and cultural phenomena.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Communication : its nature, concept, Types and Functions**Communication: Definition, Concept and Nature of communication, 7C's of Good Communication, Mass Communication (Media), Functions of Mass Communication, Various forms of communication, Concept of media as a Mass Communication vehicle. Radio and Television as a Mass Media tool: Characteristics, origin and development FM Radio, SITE Community Radio Audience: Characteristics of Audience, Audience of different Mass Media	6
II	**Models and Theories of Communication** Models of Aristotle, Dance, Harold Lasswell, Osgood, Wilbur Schramm, George Gerbner, Westley and MacLean, Shannon & Weaver, Gate keeping, Jo Harry Window, Marshall McLuhan's Theory, Marxism Ideology and the Media, Analytical Theory-Spiral of silence, Information theories-Diffusion Theory Normative Theories- Authoritarian, Libertarian, Social Responsibility, Developmental and Democratic participant	10
III	**Introducing Key Terms of Cultural Studies** Representation, Culturalism, Marxism and cultural Studies, Subjectivity and Identity, Ethnography	4
IV	**Cultural Studies in India**Notions of Indian Modernity, Colonial Legacy, Dalit Studies, Tribal/Ethnic Studies • Political use of culture and the Bhakti movement, political use of culture during the freedom movement, political use of culture and the IPTA • The Rural Hinterland and Emerging Cultural Forms of India; the Study of Culture and Cultural Studies: Convergence and Divergence, Dispelling Popular Misconceptions about Cultural Studies	10
Practical:	1. Conducting a case study analysis of a recent mass media campaign to evaluate its effectiveness in	

	reaching and engaging the target audience. 2.Organizing a mock press conference or media event to practice effective communication strategies and media relations. 3.Creating a multimedia presentation on a cultural phenomenon or media artifact, incorporating key theoretical concepts discussed in the course. 4.Analyzing and critiquing a selection of media texts (e.g., news articles, advertisements, TV shows) from different cultural perspectives. 5.Engaging in group discussions or debates on contemporary issues related to media, culture, and communication, applying various theoretical frameworks introduced in the course.	60

Suggested Readings:

1. Communication & Journalism in India - D S Mehta, Mass Communication in India - Keval J. Kumar, Jaico Publishing House.
2. International Communication – N. Prabhakar& N. Basu, Commonwealth publishers, New Delhi. Understanding Development Communication – Uma Joshi.
3. Mcquail's Mass Communication Theory – Denis Mcquail, Sage Publication. Mass Communication Models-Uma Narula.
4. History of Press in India by J. Natarajan (English), Indian Journalism by N. Krishnamurthy, Press in India by M. Chalapati Rao, Indian Broadcasting by H.R. Luthara,
5. Mass Communication in India by Keval J Kumar. Gramsci, Antonio. „
6. History of the Subaltern Classes, and The Concept of Ideology'.
7. In Meenakshi Durham and Douglas Kellner (ed) Media and Cultural Studies: A Reader.

B.SC. HOME SCIENCE II YEAR/ III SEM
APPAREL DESIGN AND CLOTHING CONSTRUCION TECHNIQUES

Programme- B.Sc. Home Science	**Year: II**	**Semester: III rd**
Course Description: This course offers an in-depth exploration of apparel design and clothing construction techniques, providing students with a comprehensive understanding of the fashion industry and the theoretical and practical aspects of clothing. Emphasizing the role and functions of clothing, the course covers the factors influencing garment selection and evaluation. Students will delve into the concept of fashion, its terminology, and the global fashion centers that shape the industry. Practical skills in garment construction are emphasized, enabling students to apply design principles to create and evaluate apparel. By the end of the course, students will be proficient in interpreting and implementing design elements to produce high-quality garments.		
Course Code: BSc HS 303(CT)	**Course Title:Apparel Design And Clothing Construction Techniques**	

Course Objective:

1. To understand the basics of fashion and the fashion industry.
2. To impart knowledge about the functions and theories of clothing.
3. To develop sensitivity towards the selection of garments and garment design.
4. To teach practical techniques for apparel design and clothing construction.
5. To apply design principles in the creation and evaluation of apparel.

Course Outcomes:

1. Identify the role and functions of clothing and recognize the factors affecting the selection and evaluation of clothing.
2. Explain the concept of fashion, its terminology, sources, and factors affecting it.
3. Develop an awareness of global fashion centers.
4. Apply the knowledge of elements and principles in design interpretation.
5. Demonstrate skills in various garment construction techniques and understand the steps involved in the creation of clothing.
6. Create and assess garments using fundamental design principles, ensuring functionality, aesthetics, and quality.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Introduction to Fashion and the Fashion Industry** • Definition and concept of fashion • Overview of the fashion industry • Key terminology in fashion • Factors influencing fashion trends • Sources of fashion inspiration	6
II	**Fabric and Materials** • Types of fabrics and their properties • Selection of appropriate fabrics for different designs • Understanding fabric behavior and performance	6
III	**Garment Construction Techniques** • Basic sewing techniques • Pattern making and draping • Cutting and assembling garments • Finishing techniques and quality control	6
IV	**Advanced Construction Techniques** • Tailoring techniques • Decorative sewing and embellishments • Creating structured garments • Understanding garment fitting and alterations	6
V	**Evaluation and Presentation of Apparel** • Assessing garment functionality and aesthetics	

	• Quality control in apparel production • Preparing garments for presentation • Fashion show production and presentation techniques	6
Practical:	1. Adult's basic bodice and sleeve block 2. Drafting of collars on basic neckline –shirt collar-one piece, Chinese band 3. Basic skirt block. Adaptation to slim, flared, gored, wrap-around 4. Garment construction: Adaptation of basic blocks to construct the following garments: • Sari blouse • Simple kameez / kurta • Salwar and Churidar • Skirt any one	60

Suggested Readings:

1. **"The Fashion System" by Roland Barthes.** A seminal work on the structural analysis of fashion.
2. **"Fashion Design Essentials: 100 Principles of Fashion Design" by Jay Calderin.** An essential guide to the principles of fashion design.
3. **"The Art of Couture Sewing" by Zoya Nudelman.** A comprehensive guide to couture sewing techniques.
4. **"Patternmaking for Fashion Design" by Helen Joseph Armstrong.** A detailed textbook on patternmaking techniques for fashion design.
5. **"Fabric Science" by Joseph J. Pizzuto.** An in-depth look at the properties and applications of different fabrics.
6. **"Fashion: The Definitive History of Costume and Style" by DK.** A visual guide to the history of fashion from ancient times to the present.
7. **"The Sewing Book: Over 300 Step-by-Step Techniques" by Alison Smith.** A practical guide to sewing techniques, perfect for beginners and advanced students.

B.SC. HOME SCIENCE II YEAR/ III SEM
Human Resource Management

Programme- B.Sc. Home Science	**Year: II**	**Semester: III rd**

Course Description: This course offers a comprehensive understanding of Human Resource Management (HRM), covering key concepts, functions, and roles in the evolving business landscape. Students will explore HR planning, recruitment, performance management, compensation, and training, along with strategic HR practices like HR audits and industrial relations. Practical simulations, case studies, and skill matrix development will enhance their ability to manage human resources effectively in dynamic organizational environments.

Course Code: BSc HS 303(RM)	**Course Title:Human Resource Management**

Course Objective:

1. To familiarise the students with the importance of human resources and their effective management in organisations.
2. To comprehend functions of human resource management.
3. To sensitize students towards the emerging trends and modern practices in the field of human resource management to meet the changing needs of business environment

Course Outcomes:

1. Develop an understanding about the discipline of human resource management.
2. Acquire knowledge about the functions of human resource management.
3. Gain insight into emerging trends and modern practices in the field of human resource management.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Human Resources Management** The fundamental concepts of human resource management and its applicability in changing business environment. • Concept, functions, roles, skills and competencies • Changing environment of HRM- Globalization, corporate downsizing, cultural environment, work force diversity, changing skill requirement, technological changes. • HRM support for improvement programs -re engineering processes, contingent workforce, decentralized work sites.	6
II	**Functions of HRM** • Manpower planning • Job Analysis – job description and job specification • Recruitment and selection • Placement and Induction • Performance appraisal and development • Compensation and Benefits • Training and Development • Motivation	10
III	**Human Resources Audit** Insights about the components of HR system used in an organization for auditing purposes to check its effectiveness. • Concept, significance, components and process • HRM as a strategic partner • Work life balance.	8
IV	**Industrial Relations** • The role of HR in industrial relationship management. • Introduction to Industrial Relations and Industrial disputes • Employee grievances and Discipline • Collective bargaining	6
Practical:	1. Analysis of human resource management environment and HR audit in an organization through case-studies.	

	2. Simulations/Presentations: a. Human Resource Planning b. Job Analysis: job description and job specification c. and Design (levels) d. Recruitment, selection, and placement Strategies e. Interview techniques and skills (mock interview) f. Performance appraisal and management (methods) 3. Developing Matrix for skill and talent acquisition	60

Suggested Readings:

1. Aswathappa K. (2021). Human Resource Management Text and Cases (9th Ed.) McGraw Hill Education India. 24
2. Dessler G. (2020). Human Resource Management, Prentice Hall of India Pvt. Ltd, New Delhi.
3. Decenzo, D. A., & Robbins, S. P. (2011). Fundamentals of Human Resource Management. India: Wiley.
4. Rao, V.S.P. (2010). Human Resource Management, 3rd Edition, Excel Books. Suggested readings
5. Noe, R.A., Hollenbeck, Gerhart and Wright (2012). Fundamentals of Human Resource Management, 3rd Edition, McGrawHill Education Ltd.
6. Ivanecevich, J.M.(2010). Human Resource Management, 10th Edition, Tata McGraw Hill Education Pvt. Ltd.
7. Vance, C.M. and Paik, Y. (2009). Managing a Global Workforce: Challenges and Opportunities in International Human Resource Management, PHI Learning.
8. Subbaroo, R. (2007). Personnel and HRM – Text and Cases, Himalaya Publishing House

B.SC. HOME SCIENCEII YEAR/ IV SEM

Physical &Life Science for Home Science

Programme- B.Sc. Home Science	**Year: II**	**Semester: IV th**

Course Description: This course provides an integrated understanding of fundamental concepts in chemistry and physics. It covers solutions, acids, bases, organic compounds, and essential chemical compounds, along with key principles of mechanics, electricity, heat, optics, and sound. The course emphasizes practical applications through laboratory work, including chemical titrations, pH measurement, elasticity experiments, and electrical circuit setups, fostering a strong foundation in both theoretical and experimental science.

The students must understand the Plant kingdom, plant growth and regulation, Economically Important Plants, plant propagation methods, Sustainable Agriculture, Biotechnology in Agriculture, Animal diversity and its importance to humans and Basics of human immunity, Pandemics, genetic diseases, application of biotechnology, developmental biology.

Course Code: BSc HS 401	Course Title:Physical &Life Science for Home Science

Course Objective:

1. To develop basic understanding of different chemical and physical concepts and to relate them with everyday life.
2. To enhance skills of students in handling different equipment.
3. To impart the basic knowledge of animal diversity, plant diversity and its significance for human life.
4. To make students aware of the fundamental process of plant growth and its regulation.
5. To enable students to learn about methods of sustainable agriculture, plant conservation and propagation.

Course Outcomes:

1. Study about different chemicals/compounds, their reactions and applications in everyday life.
2. Correlate structures of compounds with their properties and functions.
3. Develop understanding of the basic principles, theories and laws of physics and correlate them with real life situations.
4. Acquire ability to demonstrate basic experimental skills, handling different equipment and understand their working principles.
5. Apply the basic knowledge to different fields of home science.
6. The students would be able to identify and appreciate some common plant and animal diversity in their vicinity.
7. The students would gain hands-on experience and training on gardening and plant propagation techniques along with the artificial methods of vegetative propagation.
8. The students would understand the importance prenatal screening and natal health.

Credits: 3+1	Course Type: DSC
Max. Marks: 100+50	Min. Passing Marks:40+20

Total No. of Lectures: Theory(45)+Practical(60)

Units	Topic	No. of Lectures
I	**Basic Concepts of Chemistry** • Solutions- Properties of water, types of solutions, ways of expressing concentrations of solutions (normality, molarity, strength), colloids (types, properties and applications of colloids) • Acids and bases – Definition (Arrhenius, Lewis and Bronsted), examples and applications in daily life, pH, pH scale, buffer solutions and pH measurement • Oxidising and reducing agents - Oxidation and reduction, antioxidants, examples and applications • Organic Chemistry – Tetravalency of carbon, catenation, functional groups, types of organic compounds and their importance, nomenclature (examples- alkanes, alkenes, alkynes, alcohols, alkyl halides, aldehydes, ketones, amines, acids and esters).	10

II	**IntroductiontoPlantKingdom** • BriefIntroduction to Plant Kingdom • Economic importance of Microbes (Industrial &HouseholdProducts, Sewage treatment, Biogas production, Bio control agents,Bio-fertilizers) • Plant Nutrition and Soil: Essential Elements and Functions,Nutrient cycles, Human Impact on nutrient cycles andeffectsof pollution • Introduction to Economically important plants: FoodCrops,FibreCrops,MedicinalPlants,OilCrops,TimberPlants	6
III	**Propagation, Gardening and Conservation of Plants** • SeedPropagation and VegetativePropagation:Cuttings–stemleafandroot, Layering, Grafting, Tissue Culture • Sustainable Agriculture: Concept of Organic farming, IPM, Biopesticides, Climate smart agriculture, Seed bank, Urban Agriculture	10
IV	**AnimalDiversityandHumanNeeds** • Types,StructureandFunctionofAnimalCellanditscomponents(Chromosomes and Nucleus) • Animaldiversityand itsdistribution • Zoonotic and Parasitic diseases- Life cycle, pathogenesisand control. (*Plasmodium*, *Giardia*, *Entamoeba*, *Taenia*,*Ascaris*,*Covid-19*, *malaria*, *tuberculosis*) • Animalsaseconomicresources:sericulture,apiculture, aquaponics(concept and applications)	4
Practical:	Section A- Chemistry 1. Safe handling and disposal of chemicals generally used in chemical laboratories 2. Calculation and preparation of standard solutions (Sodium chloride, sodium bicarbonate) 3. Determination of pH of different solutions 4. Preparation of Kitchen garden and herbarium file. 5. AvisittoHomeGarden/Organicfarm/TissueCultureLab 6. Animal kingdom specimen record book. 7. StudyofcellStructurethroughtemporaryslides (onion cell and cheek cell) 8. Casestudyofazoonotic/parasiticdisease: COVID-19pandemics/birdflu	

		60

Suggested Readings:

1. Ahluwalia V. K. Dhingra, S. and Gulati, A. (2005). College Practical Chemistry, University Press (India) Pvt. Ltd., New Delhi.
2. Bahl A. and Bahl B.S. (2016). A textbook of Organic Chemistry. S. Chand and Sons, New Delhi.
3. Boyle G. (2012). Renewable Energy, Power for a sustainable future 3rd Ed. Oxford University Press, U.S.A. 4. Gomber K.L., Gogia K.L. (2015). Fundamental Physics. Pradeep publications, Jalandhar.
4. Sharma P. and Pathania. (2016). Principles of Physical Chemistry. Vishal Publishing Company, New Delhi. 6. Sukhatme, S.P. and Nayak, J. K. (2017). Solar energy. Tata McGraw - Hill Publishing Company Ltd., India.
5. Walker, J., Resnick, R., Halliday, D. (2013). Fundamentals of Physics. Wiley, United States.
6. Bahl A. and Bahl B.S. (2012). Advanced Organic Chemistry. S. Chand and Sons, New Delhi.
7. Jacob T. (1979). Textbook of Applied Chemistry. McMillan India Ltd., Noida.
8. Lal S. (1995). Fundamental Physics. Pradeep Publication, Delhi.
9. Morrison and Boyd. (2011). Organic Chemistry. Pearson Education, New Delhi.
10. Singh H. (2001). B.Sc. Practical Physics. S. Chand and Co., New Delhi.
11. Vogel (2009). Quantitative Chemical analysis. Pearson Education, New Delhi.

B.SC. HOME SCIENCE II YEAR/ IV SEM

Personal Finance and Consumer Studies

Programme- B.Sc. Home Science	**Year: Second**	**Semester: IV**
Course Description: Gain knowledge of income, saving and investment management in the changing socio-economic environment. Classroom discussion on the concept of money and income,classification of income giving emphasis on the various components of family income with suitable examples. Designing the various kinds of household record keeping methods.		
Course Code: B.ScHS-402	**Course Title: Personal Financeand Consumer Studies**	

Course Objective:

- To understand the concept of family income, expenditure pattern, savings & investment, market & marketing strategies.
- To enable students to manage their personal finances through various investment avenues.
- To create awareness regarding the legal system and alternative mechanism of consumer redressal.

Course Outcomes:

- Gain knowledge of income, saving and investment management in the changing socio-economic environment.
- Understand the role of consumer in the economy, consumer problems, education and empowerment.
- Comprehend issues related to consumer protection, legislative measures and redressal mechanisms.
- Gain practical knowledge of critically evaluating and designing various consumer aids.
- Have a practical understanding of various existing redressal mechanisms.
- Understand the schemes and services offered by banks and post offices and learn to fill various bank and personal income tax forms.
- Learn to undertake food adulteration tests through lab analysis.

Credits: Credit: 4 (Theory 3; Practical 1)	Course Type- Minor
Max. Marks: 100+50	Min. Passing Marks: 40+20

Total No. of Lectures: Theory 30 periods; Practical 15 periods

Theory(Credits 2; Periods 30)

Units	Topic	No. of Lectures
I	**UNIT I: Income and Expenditure** ● Household Income – Types, Sources, Supplementation of family income ● Income management – significance of budgeting, steps of making a budget, controlling through household accounts and evaluation ● Factors influencing expenditure pattern ● Family savings and investments- need, principles, channels of investment, tax implications ● Consumer credit- need, sources ● Personal finance management	**10**
II	**Consumer in India: Consumer problems and education** Definition of a consumer Role of consumers in the economy, National Income, Per Capita Income ●Types of consumer problems – products and service related, Causes and remedies ● Guidelines for wise buying practices ● Consumer education and empowerment, sustainable consumption ● Changing nature of the business world –e-commerce, e-business	**10**
III	**Consumer Protection** Consumer protection, Consumer rights and responsibilities Consumer organizations – origin, functioning, role and type Basic legislative framework for consumer protection in India, Consumer Protection Act 1986 (COPRA), Alternative redressal mechanisms Standardization and quality control measures	**10**
		30

Suggested Readings:

- Mital, M., Sawhney, H. K. (2015). *Family Finance and Consumer Studies*. New Delhi: Elite

Publishing House Pvt. Ltd. Chapter -6 (Family Income, Pg 53-69), Chapter -7 (Family budgets, Pg 70-86), Chapter -8 (Family expenditure pattern, Pg 87-97), Chapter -9 (Savings: Need; types and determining factors, Pg 98-116), Chapter-10 (Investment: Objectives and sound principles, Pg 117-122), Chapter-11 (Investment channels for financial assets, Pg 123-148), Chapter-12 (Investment through insurance: Life insurance policies, Pg 149-163), Chapter-13 (Investment channels for physical assets, Pg 164-172), Chapter-14 (Investor protection, Pg 173-176), Chapter-15 (family credit, Pg 177-194).

- Mital M., Jain, S., & Mehta, C. (2015). *Family finance and Consumer Studies: A Practical Manual, Second Edition.* New Delhi: Elite Publishing House Pvt. Ltd.
- Seetharaman, P. and Sethi, M. (2001). *Consumerism: Strength and Tactics*. New Delhi: CBS Publishers.

Practical

(Credit 2; Periods 30)

Units	Topic	No. of Lectures
I	● Case study of banks and post offices to understand their services and products. ● Learning to fill different bank forms. ● Analysis of consumer redressal through case study approach. ● Survey on consumer issues. ● Personal Income Tax calculation.	15
		15

Laws, Policies and Programmes for Children, Women and Families

Programme- B.Sc. Home Science	Year: II	Semester: IV

Course Description: This course provides a comprehensive understanding of the legal and constitutional status of women and children in India, examining relevant laws, policies, and rights-based approaches. It addresses challenges in implementation and explores key legislation, policies, and international conventions, such as CEDAW and UNCRC that protect the rights of women and children. Through practical activities like surveys, interviews, field visits, and media resources, students will gain insights into real-world conditions and develop advocacy materials to raise awareness of existing laws and policies.

Course Code:B.ScHS-403(HD)	Course Title :Laws, Policies and Programmes for Children, Women and Families

Course Objective:

- Toorientstudentstotheconceptofchildrights
- Tofamiliarizethemwiththeexistinglaws,policies andprogrammesforchildren,

womenandfamilies

- Togainanunderstandingoftheimplementationprocessofpoliciesandprogramme sforchildren,women andfamilies andtheroleofvariousstakeholders.

Course Outcomes:

- Thestudentswillunderstandwhychildrightsareimportant
- Thestudentswilldemonstrate an understandingof currentsocialpolicies for childrenandwomeninIndia
- Thestudentswilldevelopunderstandthepoliciesandprogrammesforchildre n,womenandfamilies

Credits: 2+2	**Course Type- DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	IntroductiontotheRightsbasedApproach Thefocusofthisunitwouldbeondevelopinganunderstandingoftheconceptofrights,internationalconventionsand constitutional provisions. • Concept ofChild Rights and whytheyareimportant • Situationalanalysisofchildrenin India • Childrenindifficultcircumstances • Factorsofexclusion-socio-economic,gender,geo-political • InternationalConventionsontherightsofchildren,women,and families	10
II	**LegislationsforChildren,WomenandFamilies** • Laws for children: Juvenile Justice Act, Protection of Children from Sexual Offences Act,ChildLabour Prohibition&RegulationAct, Prohibition of Child MarriageAct • LawsforWomen:PrenatalDiagnosticsTechniquesAct,DowryProhibitionAct,ProtectionofWomenfromDomesticViolenceAct,SexualHarassmentofWomenatWorkplace • FamilyLaws:GuardiansandWardsAct,HinduAdoptionandMaintenanceAct,SpecialMarriageact,Maintenance andWelfare of Parentsand SeniorCitizensAct	10
III	**Policies, ProgrammesandtheImplementationprocess** • ConstitutionalProvisionsforchildren andwomen • Policiesforchildren,women,andfamilies	10

I	• MajorProgrammesforchildren,women,andfamilies • Role of Government, Public-private partnership, NGOs and CSR in the implementationofprogrammes	
Practical:	1. Interviewofchildrenindifficultcircumstancesexploringtheirlives 2. Surveytoexploreawarenessofchildrightsandlawsforwomenand children 3. PreparingPPTsandmakingpresentationsonvulnerablegroupsofchildren 4. Preparingposters/flipbooks/socialmediacontent foradvocacyoflaws 5. Understandingtheconceptofrightsthroughaudio/visualaids(Movies/Documentaries)	60

Suggested Readings: Agnes, F. (1999). Law and Gender Inequality: The Policies of Women's Rights in India.OxfordUniversityPress.

- Bajpai, A. (2017). A child's right to a family: Deinstitutionalization—In the best interest ofthe child. *Journal of National Human Rights Commission, 16,* 199–216. http://nhrc.nic.in/sites/default/files/nhrc_journal_2017.pdf
- Biswas, T. (2008). Human Rights, Gender and Environment. In N. Pradhan (Ed.*), Laws,Institutionsand RightsinIndia.* VivaBooks.
- Begum,S.M.(Ed.).(2000).HumanRightsinIndia:issuesandperspectives. APHPublishing.

B.Sc. Home Science

Food Science and processing

Programme- B.Sc. Home Science	**Year: II**	**Semester:IV**

Course Description:

The course on Food Science and Processing explores the principles and techniques involved in the production, preservation, and quality control of food products. Students will learn about the science behind food processing, including unit operations, food preservation methods, and the role of additives. Additionally, the course will cover the nature of food constituents, additives, and adulterants, as well as the impact of storage and processing operations on food quality.

Course Code:B.ScHS-403(FN)	**Course Title : Food Science and processing**

Course Objective:

- Understand the role of food preservation and food additives
- Understand the effect of storage and pre & post processing operations
- To understand concepts of unit operations in processing.
- To understand principles of food preservation and its application.
- To understand nature of various food products constituents, additives and adulterants**.**

Course Outcomes:

1. Gain an understanding of the role of food preservation and food additives in maintaining food quality and safety.
2. Comprehend the impact of storage, pre-processing, and post-processing operations on food products.
3. Acquire knowledge of unit operations in food processing and their significance in food production.
4. Learn the principles of food preservation and apply them to ensure the longevity and quality of food products.
5. Identify the nature of various constituents, additives, and adulterants in food products, and understand their implications on food quality and safety.

Credits:2+2	**Course Type- DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Food Preservation** a) Principles of Food Preservation: Asepsis, Removal Of Microorganism, Anaerobic condition b) Preservation methods and processes: Preservation by chilling and freezing and its types. **Food Laws and standard** a) CODEX b) WTO c) ISO a) FSSAI b) ICMSF c) HACCP	10
II	**Food additives** a) Functions of food additives b) Preservatives c) Anti-oxidants d) Fortifying agents e) Anti-caking agents f) Special dietary sweeteners g) Nutrients supplements h) Bleaching and maturing agents i) Leavening agents j) Colouring agents k) Flavouring agents	5
III	**1. Raw material preparation**- Cleaning, sorting, grading and peeling **2. Size reduction**- Size reduction of solid foods,	5

	size reduction in liquid foods (Emulsification and homogenization) theory and equipment 3. **Separation and concentration of food components**- Centrifugation, Filtration, Expression, Extraction using solvent, membrane concentration (Hyper filtration and ultra filtration),theory equipments and effects on foods.	
IV	**Heat processing using steam or water** **Pasteurization:** theory equipment (Pasteurizati packaged foods and Unpackaged food products), on food, colourflavour, aroma and vitamins **Sterilization**: In-containers sterilization, t retorting and equipments, Ultra high temperature/ a processes: Theory, processing, equipments, effe food – colour, flavour and aroma, texture and vis nutritive value **Evaporation and distillation:** evaporation, effe food, distillation 1. **Extrusion:** Theory: rheological properties of operating characteristics, equipments- Single extruder, twin screw extruder, ancillary, equip application, cold extrusion – cooking, effe food, sensory characteristics and nutritional val 2. **Heat processing by hot air:** dehydration- t brine using heated air and heated su equipments: Hot air driers, heated surface (or c driers), effects on foods (texture, flavour and a colour nutritional value). 3. **Baking:** Theory, equipments, direct heat, in heating and batch ovens, continuous and continuous ovens, effect on food texture, f aroma and colour and nutritional value.	**10**
Practical:	1. Methods of grading and cleaning of materials (grains, spices, fruits and vegetab 2. Visit to milk and milk products proc industries for exposure of student measurement of pressure, flow of fluids exchangers and dryers, elevating and conv equipments, size reduction equipment, analysis, food plant design, and mech separators. 3. Texture analysis of foods by texturometer. 4. Determination and estimation of adultera foods: honey, fats & oils, spices (turmer red chili powder). 5. Carotenoid estimation in fruits and veget 6. Effect of heat on Chlorophylls and its estir in foods by Spectrophotometer.	60

	7. Visit to bread and biscuit industry to ob mixing and forming operations and equipment.	

Suggested Readings:

1. Fellows P J (2002), Food Processing Technology- Principles and Practices, 2nd Edition. Woodl Publishing Ltd
2. Harper J C, (1975) Elements of Food Engineering. A VI, West port.
3. Fennema O R, (1985), Principles of Food Science: Part- II Physical Principles of Food Preserv Marcel Decker New York
4. Peter S. Murano (2003), Understanding Food Science and Technology. Peter Marshall Publish
5. Winton & Winton, (1991) Techniques of Food Analysis. Allied Scientific Publishers.
6. Rahman M S, (2007) Handbook of Food Preservation 2nd Edition by Taylor & Francis Group, Press.

PATTERN MAKING AND CONSTRUCTION

Programme- B.Sc. Home Science	**Year: II**	**Semester: IV**

Course Description:

This course offers a comprehensive introduction to body measurements, pattern making, and garment construction, essential for students aspiring to careers in fashion design and apparel production. Students will learn to accurately measure both the body and garments, laying the foundation for precise pattern creation and adaptation. They will gain proficiency in pattern layout, fabric cutting, and utilizing sewing machines for basic sewing tasks, ensuring they understand thread types, needles, and stitch lengths suitable for different fabrics. Emphasis is placed on mastering various seam types and techniques crucial for constructing garments. By focusing on fit assessment and pattern alterations, students develop the skills necessary to create well-fitted garments and address design challenges professionally. This course equips students with practical skills and theoretical knowledge crucial for success in the fashion industry, enabling them to pursue careers in pattern making, garment construction, and fashion design advancement.

Course Code:B.ScHS-403CT	**Course Title:Pattern Making and Construction**

Course Objective:

1. To introduce students to basic concepts of Body measurements and pattern making.
2. To equip the students with the knowledge of pattern layout, fabric cutting, garment sewing and assessing fit in a garment.

Course Outcomes:

1. Take measurements from body and garments accurately.
2. Create patterns of simple women's clothes and apply the pattern information correctly.
3. Operate a sewing machine for simple sewing tasks using the correct thread, needle and stitch length for various fabrics.
4. Use various types of seams and seam techniques during garment construction
5. Apply concept of fit, evaluate garment fit and do pattern alterations as necessary.

Credits: 2+2	**Course Type- DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Body Measurements and Pattern Making** • Importance of Body measurements, Body Landmarks, Correct procedure of taking body measurements, size charts, Taking measurements from Garments o Garment Ease - type and amount in different garments • Basic Blocks and their importance • Methods of pattern development: Drafting, Flat pattern making, Draping • Types of paper pattern - Commercial pattern, Graded pattern, Production pattern • Pattern information and marking symbols and their importance	10
II	**Sewing Machines** • Classification of Sewing machines • Components of a Basic Sewing machine and their functions • Introduction to Industrial sewing machines- single needle lock stitch, overlock, blind stitching, button hole and button stitching, bartacking • Sewing defects and remedies • Care and maintenance of a sewing machine, precautions while working on a sewing machine Selection of threads, needles and stitch length for various fabrics	10
III	**Sewing Techniques and Garment Fit** • Garment Support Fabrics (Lining, Underlining, Interlining, Interfacing) – their use and selection	

	• Basic seam categories- super imposed seam, lapped seam, bound seam, flat seam, decorative seam, ridge seam • Additional seam techniques: clipping, notching, grading, trimming, easing, under stitching, stay stitching, trimming a corner • Finishing of straight & curved edges- self finish, crossway strips, bias facing, bias binding, shaped facing, self-finishing, casings and finishing with trims • Elements of Fit: line, ease, grain, set and balance • Fit evaluation, Common fitting problems and pattern correction	10
Practical:	**1. Development of Basic Blocks and design variations** • Adult women's bodice block, sleeve block, skirt block • Developing design variations in adult skirt- A-line, flared, wrap-around, pleated, skirt with yoke **2. Seams and Garment Construction** • Samples of Seams – Plain Seam, French seam, Run-n-fell seam, Lapped seam, Top stitching, Bound/Piped seam, Slot seam, Curved and Corner seam • Necklines and their finishing: bias facing, bias binding, shaped facing • Adaptation of basic blocks to construct Saree blouse, Kurti/Kameez, Skirt • Construction of lower garments: Salwar/ Churidar, Palazzo	60

Suggested Readings:

1. Armstrong, H.J., (2009), Pattern Making for Fashion Design, Harper Collins Publishers Inc.,New York.
2. Brown, P. and Rice, J., (1998), Ready-to-wear Apparel Analysis, Prentice Hall
3. Colton V. (1995). Reader's Digest- Complete Guide to Sewing. New York: The Reader's Digest Association, Inc.
4. Knowles A. (2006). Patternmaking for Fashion Designers. New York: Fairchild Publications Inc.
5. Liechty, E.G., Potterberg, D.N., Rasband, J.A., (2010), Fitting and Pattern Alteration: A
6. Multimethod Approach, Fairchild Publications, New York
7. Kallal, M. J., (1985), Clothing Construction, Macmillion Publishing Company, New York
8. Kindersley D. (1996). The Complete Book of Sewing. London: Dorling Kindersley Limited. MacDonald M. (2009). Principles of Flat Pattern Design (4th Edition). New York: Fairchild Publications Inc
9. Stamper, A.A., S. H. Sharp and L.B. Donnell, (1986), Evaluating Apparel Quality, Fairchild Publications, America

B.Sc. Home Science

Communication for Development

Programme- B.Sc. Home Science	Year: II	Semester:IV
Course Description: This course delves into the concept of development, its goals, and global disparities, focusing on human development indices (HDI, GDI, etc.) and the characteristics of developing countries. It further explores the role of communication in promoting development, covering various models, strategies, and media platforms. Through practical assignments, students will critically analyze development indicators, communication initiatives, and media content related to development across sectors such as health and environment.		
CourseCode:B.ScHS-403(CE)	**Course Title : Communication for Development**	
Course Objective: • Tounderstandtheconceptofdevelopmentanddevelopmentindicators. • Togaininsightsintotheconceptof Development Communication,philosophy,theories • andapproaches. • Toinculcatetheknowledgeofdevelopmentcommunicationandrelationswithmedi		

aandsociety.

- Tocomprehendaboutproblemsandissuesofthe development.
- Toexaminetheroleofvariousmediaindevelopmentcommunication.

Course Outcomes:

- Beconversantwiththedimensionsofdevelopmentandthedevelopmentframeworks.
- Comprehendthekeyconcerns ofdevelopmentand theroleofcommunication.
- Understandissuesindevelopmentasabasisfor effectivedevelopmentcommunication.
- Comprehendtheroleofinformation,communicationandmediainthefieldofdevelopmentandsocialchange.

Credits: 2+2	**Course Type- DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	UNITI:DevelopmentandDevelopmentIndicators Theunitelucidatesontheconceptofdevelopmentanditsvariousdimensions.Itprovidesanoverviewofdevelopmentgoalsand highlights thelevel ofdevelopmentacross countries. • Conceptofdevelopment • Growthvsdevelopment • Developmentgoals • Classificationofcountriesbasedondevelopmentindices • Indicesasameasureofhumandevelopment(HDI,GDI,GII,GGI &MPI) • Characteristicsofdevelopingcountries	10
II	**UNITII:DevelopmentCommunication(DC)** contributes toinclusivegrowth. • DevelopmentCommunication(DC)-concept, genesis,characteristics,and philosophy • ApproachestoDC • ModelsofDC-DominantParadigm,DependencyModel,BasicNeeds Model,NewParadigmofdevelopment, ParticipatoryFramework, Rightbasedapproach • SuccessstoriesandInnovationsinDC	10

	• GrowthandtransitionsinthefieldofDC-DevelopmentSupportcommunication;IEC,BCC,SBCC to SBC; Socioecological model	
III	**UNITIII:MediaandDevelopmentCommunication** communication.Theunithighlightstheroleofdifferenttypesofmediainthearenaofdevelopmentcommunication. • DCstrategiesandcommunicationsystemsdialogue;scopeforparticipation,engagementandfeedback • RoleofTraditional MediainDC • DevelopmentReportingin India:Print,ElectronicsandNewmedia • Roleofmass mediain DC • TheoriesofPress • CommunityMedia: Types, Rolein DC • MainstreamMediaand DigitalMediainDC • ScopeofICTs • ConvergenceandpartnershipsforDC • RoleofGovernmentandotheragenciesinDC	10
Practical:	1. Analysisofdevelopmentindicators(HDI,GDI,GII,GGI,MPI) 2. Criticalanalysisofselecteddevelopmentcommunicationinitiatives 3. AnalyzinganddesigningprintandothermediaforDevelopmentCommunication 4. DevelopmentReportinginmediaacrossdifferentsectors(Health, Environmentetc) 5. Contentanalysisofmainstreamandalternativemedia	60

Suggested Readings: Ashford, J. B., LeCroy, C. W., & Lortie, K.L. (2010). *Human Behavior in the SocialEnvironment:AMultidimensionalPerspective*(4thed.).BelmontCA:Wadsworth/ ThomsonLearning.

- Mefalopulos, Paulo. (2008). *Development Communication Sourcebook- BroadeningtheBoundaries of Communication*, TheWorld Bank.
- Melkote,R.S.,Singhal,A.,Shirley,S., &EdnaHoltMarston,H.E.(2021).*HandbookofCommunicationandDevelopment.*EdwardElgar Publishing. ISBN:9781 789906349.
- Murthy,DVR.(2006).*DevelopmentJournalism,WhatNext*?NewDelhi:KanishkaPublications.ISBN8173918457.

B.Sc. Home Science
Principles of interior design

Programme- B.Sc. Home Science	Year: II	Semester:IV

Course Description:

The Principles of Interior Design course provides students with a comprehensive understanding of the fundamental concepts and elements that govern the field of interior design. Through a combination of theoretical instruction and practical exercises, students will learn about topics such as space planning, color theory, lighting design, furniture selection, and material choices. The course will also cover principles of balance, harmony, proportion, and rhythm in interior design. By the end of the course, students will have the knowledge and skills necessary to create aesthetically pleasing and functional interior spaces.

Course Code:BScHS-403(RM)	Course Title : **Principles of interior design**

Course Objective:

1. Gain a comprehensive understanding of fundamental concepts and elements in interior design.
2. Develop skills in space planning, colour theory, lighting design, furniture selection, and material choices.
3. Learn principles of balance, harmony, proportion, and rhythm in interior design.

Course Outcomes:

1. Apply theoretical knowledge to practical interior design projects.
2. Create aesthetically pleasing and functional interior spaces.
3. Demonstrate proficiency in utilizing principles of interior design to enhance living and working environments.

Credits: 2+2	**Course Type-DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	Introduction to Interior Design, Definition and scope of interior design, Historical overview of interior design, Elements and principles of design, Role of interior designers in the industry	5
II	Space Planning and Layout, Understanding spatial relationships, Functional and aesthetic considerations in space planning, Furniture arrangement and traffic flow, Ergonomics and human factors in design	5
III	Color Theory and Application, Basics of color theory, Psychological effects of color, Color schemes and combinations, Color trends in interior design	5
IV	Materials and Finishes, Selection and use of materials in interior design, Properties and characteristics of common materials, Sustainable and eco-friendly materials, Finishes and surface treatments.	5
V	Lighting and Accessories, Importance of lighting in interior design, Types of lighting fixtures and their functions, Lighting design principles, Selection and placement of accessories in interior spaces	10
Practical:	1. Space planning exercises to understand spatial relationships and functionality. 2. Mood board creation to explore color schemes, textures, and design concepts. 3. Furniture layout projects to optimize space utilization and traffic flow. 4. Lighting design assignments to enhance ambiance and functionality.	60

1. Suggested Readings:
2. Interior Design Illustrated" by Francis D.K. Ching and Corky Binggeli
3. The Interior Design Reference & Specification Book" by Chris Grimley and Mimi

Love
4. Interior Design: A Critical Introduction" by Clive Edwards
5. Space Planning Basics" by Mark Karlen and Rob Fleming
6. The Fundamentals of Interior Design" by Simon Dodsworth
7. Residential Interior Design: A Guide to Planning Spaces" by Maureen Mitton and Courtney Nystuen
8. Color in Interior Design" by John Pile
9. The Complete Color Harmony: Pantone Edition" by Leatrice Eiseman
10. Color Choices: Making Color Sense Out of Color Theory" by Stephen Quiller
11. Materials for Interior Environments" by Corky Binggeli
12. Interior Design Materials and Specifications" by Lisa Godsey
13. Materials and Interior Design" by Lorraine Farrelly
14. Architectural Lighting Design" by Gary Steffy
15. Lighting Design Basics" by Mark Karlen and James R. Benya
16. Interior Design Illustrated" by Francis D.K. Ching and Corky Binggeli

B.SC. HOME SCIENCE,

III YEAR, V Semester

HUMAN DEVELOPMENT III: ADULTHOOD ANDAGING

Programme- B.Sc. Home Science	**Year: III**	**Semester:V**
Course Description:		
Course Code:B.ScHS-501	**Course Title:** **Human Development III: Adulthood and Aging**	
Course Objective: • Todevelopanunderstandingofdifferentdomainsofdevelopmentinadulthood • Togainanunderstandingofhowsocio-culturalcontextsshapedevelopmentduringadulthood • Toutilizearangeoftechniquestostudydifferentdomainsofdevelopment inadulthood		
Course Outcomes: • Todescribedifferentdomainsofdevelopmentinadulthood:physical,cog nitive,languageand socio-emotional • Tounderstanddevelopmentinadulthoodinvariedcontextsandcultures • Todevelopcompetencyintheuse of differenttechniquesforstudyingvariousdomainsofdevelopmentin adulthood		
Credits: 3+2	**Course Type: DSC-1**	
Max. Marks: 100+50	**Min. Passing Marks: 40+20**	
Total No. of Lectures:Theory(45)+Practical(60)		

Units	**Topic**	**No. of Lectures**
I	**UnderstandingYoungAdulthood** ● Physicalandphysiologicalchanges ● Cognitivedevelopment ● Socio-emotionaldevelopment-relationshipsandmarriage ● Careers, workandleisure ● Gender andsexualityinIndian context	15
II	**DevelopmentduringMiddleAdulthood** ● Definition,developmentaltasksofmiddleadulthood ● Physicalchanges,healthandwell-being ● Cognitivedevelopmentandchanges ● Social and emotional development-relationships and family dynamics, maritalsatisfactionand parenting	15
	AginginLateAdulthood ● Developmentaltasksoflateadulthood	15

III	• Physicalandphysiologicalchanges associatedwithagingandhealthconcerns • Cognitivedevelopment: changesincognitiveabilities • Socio-emotional development-grand parenting, social support networks, work andretirement,leisureand overall well-being • Culture,religionandspirituality • Deathand grief	
Practical	• Tostudydevelopmentduringadulthoodusingmultimediaresources. • Caseprofileof anindividualinmiddle/lateadulthood • Useofinterview/questionnairemethodtostudyadultroles(atleastonemaleandonefemale) - Father/Husband - Homemaker - Employedwoman - Singleparent -Grandfather/grandmother -Retiredperson • Journalinginyoungadulthood • Visittoanoldagehome • Studypsychologicaltests ofintelligenceandpersonality-anythree	60

Suggested Readings:

- Berk,L.E.(2007).Developmentthroughthelifespan.Delhi:Pearson Education.
- Papalia,D.E.andMartorell,G.(2015).ExperienceHuman Development.McGraw Hill Education.
- Ranganathan,N.(Ed.).2020.UnderstandingChildhoodandAdolescence.NewDelhi:Sage
- Santrock,J.W.(2007).ATopicalApproachtoLifespanDevelopment.NewDelhi:TataMcGraw-Hill.
- Singh,A.(Ed).2015.FoundationsofHumanDevelopment:ALifespanapproach.NewDelhi: Orient BlackSwan.
- Sharma,N.(1999). UnderstandingAdolescence. NationalBookTrust.
- Rice.F.P.(1998).HumanDevelopment:Alifespanapproach.NewJersey:PrenticeHall.
- Rutter,M.andRutter,M.(1992).DevelopingMinds:Challengeandcontinuity acrossthelifespan.London: Penguin.

DIETETICS AND PUBLIC HEALTH NUTRITION

Programme- B.Sc. Home Science	**Year: III**	**Semester-V**
Course Description:		
Course Code:B.ScHS-502	**Course Title : Dietetics and Public Health Nutrition**	

Course Objective:

- Toexplaintheimportanceandscopeofpublichealthnutritionanditsrole inthehealth caresystem.
- Todevelopskillsforusingvariousmethodsand techniquesforassessingnutritionalstatus.
- TofamiliarizewiththeNationalpublichealthnutritionconcerns
- Todevelopanunderstandingabouttheprinciplesofdieteticsandnutritioncare.
- Toapprisethevariousaspectsrelatedtomanagementofsomecommondi sorders/ diseases.
- Toinculcatetheskillofdietaryinterventionaccordingtopatients'nutriti onalassessmentand diagnosis.

Course Outcomes:

- Understandtheconceptofpublichealthnutritionanditsroleinthehealth caresystem.
- Comprehendandusevariousmethodsandtechniquesforassessmentof nutritionalstatus assessment atindividual and communitylevel.
- GainknowledgeofthecurrentNationalnutritionalconcerns.
- Understandtheprinciplesofthenutritioncareprocessinhospitalsettings inthemanagement ofdiseased person.
- Abilityto modifynormal diets as perthetherapeuticcondition

Credits: 3+2	**Course Type: DSC -2**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(45)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**PublicHealthNutritionandHealthCareSystems** ● Definitionandmultidisciplinarynatureofpublichealthnutrition ● Concept,scopeandcurrentconcerns inpublichealth nutrition ● Health– Concept,definition,dimensions,determinantsandindicators	10

	• Healthcaresystems • LevelsofHealthCare - HealthCareSystem,Healthcaredeliverysysteminindia - RoleofPublicHealthsectorandothersectorsandagencies - PrimaryHealthcareinIndia - Roleofimportant schemesandinstitutions • Roleofpublichealthnutritionistinhealthnutrition	
I I	**AssessmentofNutritionalStatus** • Objectivesandimportanceofassessmentofnutritionalstatusofindividualandpopulationgroups • MethodsofAssessmentofNutritionalstatusofIndividualandPopulationgroups - Anthropometryandrelatedmeasures - BiochemicalAssessment - ClinicalExamination - DietaryAssessment - VitalStatistics, EcologicalfactorsandQualitativeAssessment Methods-An overview	10
III	**NationalPublicHealthNutritionConcerns** • Prevalence,etiology,clinicalfeatures,preventionandmanagementatcommunitylevel ofthefollowing: - Protein Energy Malnutrition, Moderate Acute Malnutrition , Severe AcuteMalnutrition - MicronutrientdeficienciessuchasVitaminAdeficiency,Nutritionalanemia,Iodinedeficiencydisorders,VitaminDdeficiencyandZincdeficiency - Fluorosis - Obesity, MetabolicSyndromeandNoncommunicabledisease -Anoverview	10
I V	**PrinciplesofNutritionCare** • NutritionCareProcess • TherapeuticadaptationsofaNormalDiet,Progressivediets	5
V	**Etiology, patho-physiology, metabolic changes, clinical features and nutritional management of** • Infection and Fevers- Typhoid, Tuberculosis, HIV-AIDS,Malaria/Dengue/Chikungunia	5

	• G I Tract disorders- Diarrhea, Constipation, Lactose Intolerance, Celiacdisease\ • Weightmanagement-Underweight,overweightandobesity • EatingDisorders	
Practical	• **Assessmentofnutritionalstatus:** - Anthropometry (height, weight , Middle upper arm circumference ,Waistcircumference) - Dietary Assessment - Food frequency questionnaire , 24 hour dietaryrecall - Review of nutritional status of population from National /Regional/NutritionSurveys (NFHS, CNNS,etc) • Planning and preparation of low cost nutritious diet/ recipes for populationgroupsvulnerabletonutritionaldeficiencydiseases(PEM,NutritionalAnemia,Vitamin Adeficiency) • Therapeutic modificationsofdiets: - Normal,soft,clear-andfull-fluid • Planningandpreparationofdiets/dishesforindividualssufferingfrom: - Febriledisorders-Typhoid,Tuberculosis - GITractdisorders-Diarrhoeaand Constipation - Weightmanagement-Underweight,overweight/obesity	60

Suggested Readings:

- Siddhu A, Bhatia N, Singh K, Gupta S (2017). Compilation of food exchangelist, Technical Series 6, Lady Irwin College, University of Delhi. Publ. GlobalBooksOrganisation, Delhi
- Vir, S. (2023). Child, adolescent and women nutrition in India: PublicPolicies, programme and progress. KW Publishers, Daryaganj, New Delhi,India.
- Seth V, Singh K and Mathur P (2018). Diet Planning through the Life Cycle:Part1NormalNutrition.APracticalManual.6thEdn.ElitePublishingHousePvt.Ltd. NewDelhi.
- Seth, V. and Singh K. (eds.) (2021) Principles of Medical Nutrition TherapyforPositiveClinicalOutcomes,1st Edition.ElitePublishingHousePvt.Ltd.
- Bamji MS, Krishnaswamy K and Brahmam GNV (Eds) (2016). Textbook ofHuman Nutrition, 4th edition. Oxford and IBH Publishing Co. Pvt. Ltd. NewDelhi
- Indian Dietetics Association, (2018) Clinical Dietetics Manual, 2nd Edition.ElitePublishingHousePvt.Ltd.
- Gibney,M.J.,Margetts,B.M.,Kearney,J.M.&Arab,L.(Eds.).(2005).PublicHealth Nutrition.Oxford, UK: BlackwellScience.
- Longvah T, Ananthan R, Bhaskarachary K and Venkaiah K (2017). IndianFoodCompositionTables.NationalInstituteofNutrition, ICMR,Hyderabad.
- ICMR (2020) Estimated Average Requirements and Recommended

DietaryAllowancesforIndians.PublishedbyNationalInstituteofNutrition,Hyderabad.
- ChadhaRandMathurPeds.(2015)Nutrition:ALifecycleApproach.OrientBlackswan,NewDelhi.
- WadhwaA.andSharmaS(2003).NutritionintheCommunity-ATextbook.ElitePublishingHousePvt.Ltd. NewDelhi
- ICMR(2011)DietaryGuidelinesforIndians.PublishedbyNationalInstitute ofNutrition, Hyderabad.
- Khanna K, Gupta S, Seth R, Passi SJ, Seth R, Mahna R, Puri S (2013).Textbook of Nutrition and Dietetics.2nd Edn. Phoenix Publishing House Pvt.Ltd.
- Mahan, L.K. & Escott Stump, S. (2020). Krause's Food & Nutrition Therapy,15thed. Saunders Elsevier
- Jelliffe DB & Jelliffe E F P (1989). Community nutritional assessment withspecialreferencetolesstechnically developedcountries.OxfordMedicalPublications.Oxford UniversityPress, Oxford, UK.
- Joshi,S.A.(2015).NutritionandDietetics,4thed. McGraw Hilleducation.
- WHOinformationonDengue/Chikungunia/Malaria Dengue-https://www.who.int/news-room/fact-sheets/detail/dengue-and-severe-dengue.Accessedon March 2023. Chikungunia-https://www.who.int/news-room/fact-sheets/detail/chikungunya
- WHOhttps://www.who.int/tools/child-growth-standards/standardsAccessedonMarch 2023
- WHO (2009) https://www.who.int/publications/i/item/9789241547635.Assessedon March 2023
- http://www.ilsi-india.org/Workshop_National_Food_Consumption_Anthropometry_I_Activity_Survey/Methodology.pdf.AssessedonMarch2023
- https://nhm.gov.in/images/pdf/programmes/wifs/operational-framework-wifs/operational_framework_wifs.pdf.AssessedonMarch 2023
- WHOhttps://www.who.int/tools/child-growth-standards/standards.AssessedonMarch 2023
- WHO (2009) https://www.who.int/publications/i/item/9789241547635.Accessed on March 2023

CHILDREN WITH DISABILITIES

Programme- B.Sc. Home Science	**Year: II**	**Semester: V**
Course Description:		
CourseCode:B.ScHS-503A(HD)	**Course Title : Children with Disabilities**	

Course Objective:

- Tounderstandthevariedperspectivesondisability.
- Toknowmajortypesofdisabilities,thecauses,prevention,characteristi csofthedisabilities and barrierswhich persons withdisabilityface.
- Tounderstandimportanceofearlyidentificationandearlyintervention, and inclusion

Course Outcomes:

- Studentswillbeabletounderstandvariousperspectivesondisabilityand waysofpreventingdisability.
- StudentswillacquireskillsinEarlyidentificationofchildhooddisability and etiologyofawiderangeofdisabilities.
- Studentwillunderstandinclusivepracticesforincludingchildrenwithd isabilityin classrooms.

Credits: 2+2	**Course Type: DSE**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No.of Lectures
I	**UnderstandingDisability** ● Definitionandconceptofdisability ● PerspectivesandmodelsofDisability ● Linkingdisabilitytomilestones ● PreventionofDisability	5
II	**TypesofDisability** ● LocomotorsDisabilities ● IntellectualDisability ● Sensorydisability-Visualandauditory ● LearningDisability ● AutismSpectrumDisorder	15
III	**DisabilityandSociety** ● Understandinginclusivepractices ● Significanceof earlyintervention ● Roleoffamilies ofchildren withdisability ● Legalprovisions	10
Practical:	1. FocusGroupdiscussiononthelistingofdisabilitiesa ndinnovationsfor PWD incommunityand schoolteaching 2. Visittoorganizationsworkingwithandforchil	60

	drenwithdisabilities(CGC,InclusiveSchools, ResourceRooms, NGOs,Hospitals) 3. Observationof childrenwithdisabilityin classrooms 4. Exploring audio visual resources with reference to children with disability andtheirfamilies 5. Surveyofpublicspaceto gaugeaccessibilityforPwD 6. Preparingpamphlets/posterstocreateawarenessabout rightsofPwD 7. Preparingdevelopmentalchecklistsforassessingdevelopmentaldelays 8. Caseprofileofachildwithdisability/ofanorganization workingwithchildrenwith disability 9. Planningdevelopmentallyappropriatematerialforchildrenwithdisabilities. 10. Selectpsychometrictests-Disabilityscreeningschedule,Portageguideforearlyintervention, Tests forLearningDisability	

Suggested Readings:

- Chopra, G. (2015). Child rights in India: Challenges and social action. NewDelhi:Springer(India)Pvt.Ltd.
- Chopra,G.(2012).*EarlyDetectionofDisabilitiesandpersonswithdisabilitiesin thecommunity.*NewDelhi: Engagepublications
- Chopra,G.(2012).*StimulatingDevelopmentofYoungChildrenwithDisabilities at Anganwadi and at Home: A Practical Guide.* New Delhi:Engagepublications.
- Chopra, G.(2011). *Mother and child care: Promoting health, preventingdisabilities.*NewDelhi: Engagepublications
- Heward, W.L., (Ed) (2000). Exceptional children: An introduction to specialeducation.NewJersey: Prentice-HallInc.
- Mangal,S.K.(2007).*Exceptionalchildren:Anintroductiontospecialeducation*.NewDelhi: PrenticeHallofIndia
- Sharma, N. (Ed) (2010). *The Social Ecology of Disability-Technical Series -3*,Lady IrwinCollege. Delhi: AcademicExcellence
- The Rights of Persons with Disabilities Act, 2016.http://scpdodisha.nic.in/sites/default/files/Gazette%20Notification%20%20of%20PwD%20Act%202016.pdf
- Draft National policy for Persons with Disability (2022)https://disabilityaffairs.gov.in/upload/uploadfiles/files/Draft%20Copy%20New%20National%20Policy%20May%202022%20.pdf. AccessedinMarch2023.
- Jangira, N.K. (1997) "Special Educational Needs of Children and Young Adults:An Unfinished Agenda," Education and Children with SpecialNeeds:FromSegregation to Inclusion,Ed. Seamus Hegarty, MithuAlur, Thousand Oaks: SagePublicationsInc.
- Karna, G. N. (1999). *United Nations and rights of disabled persons: A study inIndianperspective*.New Delhi: A.P.H.PublishingCorporation.
- Mani, R. (1988). *Physically handicappedin India*. Delhi: Ashish PublishingHouse.
- Mastropieri, M. A., & Scruggs, T. E. (2004). *The inclusive classroom:*

Strategiesforeffectiveinstruction. NY: Pearson.

- Werner, D. (Ed) (2018). Disabled village children: A guide for community healthworkers,rehabilitationworkers,andfamilies.UnitedStatesofAmerica:HesperianHealth Guides

CHILDHOOD IN INDIA

Programme- B.Sc. Home Science	**Year: III**	**Semester: V**

Course Description:		
Course Code:B.ScHS-503B(HD)	**Course Title : Childhood in India**	
Course Objectives: ● Tostudytheconceptofmultiplechildhoods inIndia ● Tounderstandthesocialandculturaldimensionsofchildhoodin India ● Toknow/appreciatethe diversecontextsofchildhood		
Course Outcomes: ● Understandthemeaningofmultiplechildhoodsandvariousviewsabout it ● Appreciatechildren'sexperiencesofethnicity,class,caste,religion,andgender ● Learnaboutmultiplecontextsofdevelopmentforchildrenanddiversechildhoodexperiences		
Credits: 2+2	**Course Type: DSE**	
Max. Marks:100+50	**Min. Passing Marks: 40+20**	
Total No. of Lectures:Theory(30)+Practical(60)		

Units	**Topic**	**No. of Lectures**
I	**ConceptualizingChildhoodinIndia** • ConstructionofchildhoodsinIndia:Socialandculturaldimensions;historicalandpolitical influences • Folktheoriesofchildhood • Portrayalinmythology,storiesandfilms	10
II	**Understanding Multiple Childhoods: Growing up in DiverseSocialContexts** ● Growingupinfamilialandextra-familialsettings ● Childhoodinfamilies ● Childhoodin schools ● Childhoodinruralandtribalcommunities	10
III	**Contemporary IssuesofChildhoodinIndia** ● Childhoodthroughthelensofsocialclass, caste, gender,and religion ● Demographicprofilein relationtodiversityandchildhoods ● Povertyanddisadvantage,childreninstreetsituations ● Genderedchildhoods/transgenderchildhood	10
Practica	• Usingthemodelof developmental niche,prepareanautobiographicalnarrativeofchildhood,elaborating	60

I:	ontheimpactofthedifferentsettingsonyour experienceas achild. • Observationanddocumentationofchildrenindifferentsocio-culturalsettings • Construct and conduct an Interview schedule (Structured/ Semi structured)to understand beliefs of children, folk lore, folk song, toys and games fordiverseethnicgroups. • Exploringdiverse Indian childhoodcontext - Audio-Visualaids:Moviesanddocumentaries - Documentation:Images,visualandprintsources • Workshops/ lecture/ seminar to understand the diverse contexts of growingupinIndia • Case profile of children with disability/working children/ children in streetsituations • Developaconceptualmap/audittrailtodepictthechildhoodsinIndiausing secondarysources • VisittoMuseumattheDepartmentofAnthropology/CraftMuseum/NationalMuseum:fordocumentingartifacts/playmaterial/clothes/anytangiblematerialon displayusedbyorfor children	

Suggested Readings:

- Behera,D.K.(Ed.).(2007).*ChildhoodsinSouthAsia*.PearsonEducationIndia.
- Jenks,C.(2020).*Childhood*.Routledge.
- Joshi,P.,&Shukla,S.(2019).*Childdevelopmentandeducationinthetwenty-firstcentury*.Springer.https://doi.org/10.1007/978-981-13-9258-0
- Kaur,R.(2022).*ConstructionsofChildhoodinIndia:ExploringthePersonalandSociocultural Contours.* Routledge.
- Saraswathi,T.S.,Menon,S.,&Madan,A.(Eds.).(2017).*ChildhoodsinIndia:Traditions, trendsandtransformations.* Taylor&Francis.
- Sharma,D.(2003).*InfancyandchildhoodIndia*.InD.Sharma(Ed.), *Childhood,familyandsocio-culturalchangesinIndia*.Oxford.
- Thapan,M.(Ed.).(2014).*EthnographiesofschoolingincontemporaryIndia*.SAGEPublicationsIndia.
- Balagopalan, S. (2019). Afterschool and during vacations: On labor anschooling in the postcolony. *Children's Geographies, 17*(2), 231-245.

NUTRITIONAL BIOCHEMISTRY -1

Programme- B.Sc. Home Science	**Year: III**	**Semester:V**

Course Description:

The course on Nutritional Biochemistry explores the relationship between nutrients and human health at a molecular level. Students will study the biochemical processes

involved in nutrient metabolism, absorption, and utilization in the body. Topics covered include macronutrients, micronutrients, energy metabolism, and the role of nutrients in maintaining overall health and preventing disease. The course will also examine the impact of dietary choices on biochemical pathways and physiological functions.

Course Code:B.ScHS-503A(FN)	**Course Title : Nutritional biochemistry -1**

Course Objective:

1. Understand the biochemical processes involved in nutrient metabolism and their impact on human health.
2. Analyze the role of macronutrients and micronutrients in maintaining physiological functions and preventing nutritional deficiencies.
3. Evaluate the relationship between nutrition and disease, including the impact of dietary choices on chronic conditions.

Course Outcomes:

1. Demonstrate a comprehensive understanding of the biochemical pathways involved in nutrient metabolism.
2. Apply knowledge of macronutrients and micronutrients to assess dietary requirements and create balanced meal plans.
3. Analyze the biochemical basis of various diseases related to nutrition and propose dietary interventions for prevention and management.

Credits: 2+2	**Course Type-DSE**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No.of Lectures
I	**Introduction to Nutritional Biochemistry** • Overview of macronutrients and micronutrients • Nutrient metabolism and its role in human health • Dietary sources of essential nutrients	5
II	**Carbohydrate Metabolism** • Digestion, absorption, and metabolism of carbohydrates • Regulation of blood glucose levels • Role of carbohydrates in energy production	5
III	**Lipid Metabolism** • Digestion, absorption, and metabolism of lipids • Functions of lipids in the body • Lipid transport and storage	5
IV	**Protein Metabolism** Protein digestion, absorption, and metabolism Amino acid metabolism and synthesis Protein turnover and nitrogen balance	5
	Micronutrients and Nutritional Deficiencies	

V	• Role of vitamins and minerals in human health • Micronutrient deficiencies and their impact on health • Assessment of nutritional status and dietary recommendations	10
Practical	• Calcium: Estimation of calcium in food and serum • Phosphorus: Estimation of inorganic phosphorus in food and serum • Ascorbic Acid: Estimation of ascorbic acid in foods • Proteins: Estimation of protein in food stuffs; Estimation of albumin, globulin and albumin/globulin ratio in serum. • Estimation of hemoglobin	30

Suggested Readings:

1. Biochemical, Physiological, and Molecular Aspects of Human Nutrition" by Martha H. Stipanuk and Marie A. Caudill

2. Nutrition and Metabolism" by Susan A. Lanham-New, Ian A. Macdonald, and Helen M. Roche

3. Biochemistry of Foods" by N.A. Michael Eskin and Fereidoon Shahidi

4. Understanding Nutrition" by Eleanor Noss Whitney and Sharon Rady Rolfes

5. Biochemistry" by Jeremy M. Berg, John L. Tymoczko, and Lubert Stryer

SOCIAL AND CULTURAL ASPECTS OF NUTRITION

Programme- B.Sc. Home Science	**Year: III**	**Semester:V**
Course Description: Students will examine how social factors, such as income, education, and access to		

food, influence dietary choices and health outcomes. The course will also address cultural influences on food preferences, eating habits, and traditional dietary practices. Through case studies and discussions, students will gain a deeper understanding of how social and cultural factors impact nutrition and health outcomes in diverse populations. Practical components will include analyzing the impact of social and cultural factors on nutrition interventions and developing culturally sensitive nutrition plans.

Course Code:B.ScHS-503B(FN)	**Course Title :Social and Cultural Aspects of Nutrition**

Course Objective:

- Understand the social and cultural factors influencing dietary choices and eating behaviors.
- Analyze the impact of social norms, traditions, and beliefs on food consumption patterns.
- Explore the role of food in shaping cultural identity and social interactions.
- Develop strategies to promote culturally sensitive and inclusive nutrition practices.

Course Outcomes:

- Identify and explain the influence of social and cultural factors on nutrition and health outcomes.
- Evaluate the significance of cultural diversity in shaping dietary habits and nutritional needs.
- Demonstrate an understanding of how social structures and cultural practices impact food access and food security.
- Apply culturally competent approaches to nutrition education and intervention programs to address diverse community needs.

Credits: 2+2	**Course Type- DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(30)+Practical(60)

Units	**Topic**	**No.of Lectures**
I	**Introduction to Social and Cultural Aspects of Nutrition:** • Overview of how social and cultural factors influence food choices and eating habits. • Understanding the impact of socioeconomic status, ethnicity, and religion on nutrition.	5
II	**Food Security and Food Systems:** • Exploring issues related to food access, availability, and affordability. • Analyzing the role of food systems in shaping dietary patterns.	5
III	**Global Perspectives on Nutrition**: • Examining global nutrition challenges and disparities. • Discussing the impact of globalization on food culture and nutrition.	5

IV	**Nutrition Education and Behavior Change:** • Strategies for promoting healthy eating behaviors in diverse populations • Understanding the role of education and communication in nutrition interventions	5
V	**Culinary Traditions and Food Practices:** • Exploring traditional food preparation methods and culinary heritage. • Investigating the cultural significance of food rituals and celebrations.	10
Practical	1. Conducting a cultural food assessment in a community. 2. Make a food security project. 3. Designing and implementing a nutrition education program for a target group. 4. Conducting a cooking workshop focused on traditional recipes from different cultures. 5. Field visits to observe cultural food practices and community nutrition programs.	30

Suggested Readings:

1. Cultural Food Practices" by Margaret M. Condrasky and "Food and Culture" by Carole Counihan.
2. Food Security and Nutrition" by P. S. Birthal and "Nutrition and Food Security" by S. Mahendra Dev.
3. Gender and Nutrition" by P. S. Birthal and "Gender, Nutrition, and the Human Right to Adequate Food" by Anne C. Bellows.
4. Globalization and Food" by David Inglis and "Food, Globalization, and Sustainability" by Peter Oosterveer.
5. Community Nutrition Education" by N. S. Gopalan and "Nutrition Education" by Suneetha Kadiyala

GENDER, MEDIA, AND SOCIETY

Programme- B.Sc. Home Science	**Year: III**	**Semester: V**

Course Description:

This course examines the intricate relationship between gender, society, and mass media,

exploring how media influences and shapes our perceptions of gender roles and identities. Students will gain a critical understanding of how traditional gender constructs are reinforced and challenged through various media forms, including new technologies. By analyzing key concepts and media representations, students will be equipped with insights essential for careers in media, journalism, social advocacy, and gender studies. This course prepares students to navigate and contribute meaningfully to discussions on gender representation and societal norms in the evolving media landscape.

Course Code: B.ScHS-503A(CE)	**Course Title:Gender, Media, and Society**

Course Objective:

- To sensitize students to the gender dynamics operating in societies and theirimpacton overalldevelopment at regionaland nationallevel.
- Tounderstandthegender-baseddifferentialsintermsofsocio-culturalconstraints, deprivations and violence faced by men and women during theirlifecycleand thelegal redressalavailable.
- To make students appreciate the inter-linkages between gender, media andsociety and how media can play an important role in in promoting Genderequity.

Course Outcomes:

- The students will understand and internalize the concepts of sex and genderandhowvarioussocio-economic-cultural-politicalpracticesimpacttheconstructionofgender.
- The students will develop appreciation of inter-relationships between genderequality/equity on one hand and gender and development based indicators ontheother.
- Thestudentswillbeabletoappreciatethedimensions,theoriesandapproachesofwomen empowerment.
- The students will be enabled to critique the role of media in promoting genderequalityand equity.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Understanding key concepts:** • Differences between sex and gender • Gender – Society –Media • Gender socialization in family and society • Patriarchal institutions and key areas of patriarchal control • Caste, class and gender inter-sectionality in India • Gender identities and sexual orientations (femininity, masculinity, LGBTQIA)	5
II	**Gender representation in various media**	5

	• Television – Newspapers- Magazines- Journals, Radio programs – Films – Television Serials and Web Series – Theatres, Folk arts, Music Videos - Dance – Advertisement • Caste, class, and Gender bias in Indian media • Trivialization • Gender Stereotype • Negative portrayal • cyber bullying • Co-modification of women in media	
III	**Society-media relation in Gender construction** • Social construction of gender reality by contemporary media • Mainstream media and gender • Representation of women in media in political, cultural and social landscape • Gender and media ethics • Gender and ICTs	10
IV	**Gender question in Digital media, social media**: • Recent trends in media Culture. • Twitter • Facebook • WhatsApp • Instagram • Telegram • Snap chat • Online activism on gender issues • Need for engendering media	10
Practical	1. Theme based Writing about any Community. 2. Presentation on the relationship between gender media and society. 3. Produce a paper, analyzing the gender representation (Positive and negative both aspects) through news coverage/Digital media/social media on a particular issue of their choice. 4. Visit to any women Organization around you. 5. Review representation of gender in Politics. 6. Analysis of gender specific cyber bullying.	60

Suggested Readings:

1. Bhasin, K. (1993). *What is patriarchy?* New Delhi: Kali for Women.
2. Chatterjee, P. (2002). *Community, gender and violence*. Delhi: Permanent Black.
3. Bhasin, K. (2003). *Exploring masculinity.* New Delhi: Women Unlimited.
4. Dasgupta, S., Sinha, D., & Chakravarti, S. (2011). *Media, gender, and popular culture in India: Tracking*

change and continuity. New Delhi: Sage Publishing India
5. Bathla, Sonia, Women, Democracy and the Media: Cultural and Political Representation in the Indian Press, Sage, New Delhi, 1998
6. Creedon, P.J.,(ed) Women in Mass Communication, Sage, Newbury Park, CA,1993.
7. Giles, Judy & Tim, Middleton, Studying Culture: A Practical Introduction, Blackwell Publishers, Oxford, 1999
8. Joseph, Ammu, Women in Journalism: Making News, Konark Publishers Pvt. Ltd, Delhi, 2000
9. Kosambi, Meera (ed), Women's Oppression in the Public Gaze: Analysis of Newspaper coverage, State Action and Activist Response,
10. Research Centre for Women's University, Mumbai, 1994
11. Krishnan, Prabha and Anita Dighe, Affirmation and Denial: Construction of Feminity on Indian Television, Sage Pub, New Delhi, 1990
12. Pande, Mirnal, The Subject is Women, Sanchar Publishing House, New Delhi,1990
13. Poonacha, Veena, Coverage of Women in the Print Media: Content Analysis of the Sunday Observer, Research Centre for Women Studies, SNDT Women's University, Bombay, 1998.

NEW MEDIA FOR CHANGE

Programme- B.Sc. Home Science	**Year:III**	**Semester:V**
Course Description:		
Course Code: B.ScHS-503B(CE)	**Course Title : New Media for Change**	

Course Objective:

- Tosynthesizeacomprehensiveviewofkeyconceptsandtheoriesinvolvedinnewmedia.
- Toappreciateand expresstheculturalsignificanceofnewmedia.
- Toexplorethemyriadwaysthatpeopleandorganizationsusenewmediaastoolsforcivicengagement, activism,and political participation.
- Toexplorehowtechnologicalchangeseffectsocialinstitutionsandsociety.

Course Outcomes:

- Acquireknowledgeofnewmediatools.
- Learnthe conceptandimportanceofthedigitalculture.
- Understandthepotentialandlimitationsofnewmedia.
- Evaluatetherole and usesofnewmediatechnologyacross cultures.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**UnderstandingNewMedia:FormatsconceptsandTheories** • Understandingnewmedia;trans-media/multimediastorytelling • Computer/mobile-mediatedcommunicationandthenotionofdigital • HistoryofNewMedia • Newmedia conceptsand theories;Networkedsociety • Convergenceculture • Mediatizationtheory • Actor-networktheory	10
II	**ApplicationinNewMedia** • Proliferationofnetworks • Educationalusesofnew media • Useofnewmediaingovernance • Civic,Community,andPublicEngagement • Critiqueofnewmediaasatoolofsurveillance and oppression • Socialmediaasaliberatingforce • Digitaldemocracyandparticipation	10
III	**NewMediaLawsandEthics** • NeedforLawsandEthicsinNewMedia • NewMediaLawsandActs • SocialMediaFreedomofExpression	10

	• IntellectualPropertyRights • Privacy,DataandInternationalLaw • HateSpeech • PornographyandObscenity • Defamation • GovernmentCensorship • NewMedia and Democracy • NewMedia andActivism	
Practical:	• Casestudiespertainingtoethicalissues intheuse ofnewmedia. • EvaluationofNewMediacampaigns. • DevelopmentandDesigningofNewMediaCampaigns • ContentDevelopmentfor variousnewmediatools.	60

Suggested Readings:

- Jenkins,Henry.(2006).ConvergenceCulture:WhereOldandNewMediaCollide.NewYork, NY:NYUPress.
- Computer-MediatedCommunication:ATheoreticalandPracticalIntroductiontoOnlineHuman Communication,Rowman& Littlefield,April 2021.
- JohnC.SherblomComputer-MediatedCommunication:ApproachesandPerspectives,6 March 2019
- AaronLangilleandVictoriaKannenVirtualIdentitiesandDigitalCultureTaylor& FrancisLtd, 2021.
- JeremyHarris Lipschultz,SocialMediaLaw and Ethics,Routledge,2021
- MikeZYao,RichLing,"WhatIsComputer-MediatedCommunication?"— AnIntroductiontotheSpecialIssue,JournalofComputer-MediatedCommunication,Volume25,Issue1,January2020,Pages4–8,https://doi.org/10.1093/jcmc/zmz027.
- PannuParveen,TomarAYuki,CommunicationTechnologyforDevelopment,IKInternational publication, 2012.

FABRIC PRODUCTION

Programme- B.Sc. Home Science	**Year: III**	**Semester: V**

Course Description:

This course equips students with comprehensive knowledge of fabric manufacturing techniques, focusing on handloom and advanced weaving operations. It covers diverse knitted constructions, enabling students to identify and explain different knitting machines and principles. Insights into non-woven fabric formation techniques and production methods are also provided. Students will gain proficiency in fabric construction, weave design, and stay abreast of modern weaving technology developments. This curriculum enhances career advancement by fostering expertise in textile manufacturing and innovation.

Course Code: B.ScHS-503A(CT)	**Course Title:Fabric Production**

Course Objective:

- Gain knowledge about different fabric manufacturing techniques
- Develop an understanding about handloom
- Develop awareness about different types of knitted constructions
- Acquire insight into Non-woven fabric

Course Outcomes:

- Comprehensive Understanding of Looms and Weaving Operations
- Proficiency in Fabric Construction and Weave Design
- Students will gain knowledge of modern developments in weaving technology
- Students will be able to explain the principles of knitting, identify different types of knitting machines
- Students will understand the basics of non-woven fabric formation techniques and the various methods used in the production of non-woven fabrics

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Introduction to Fabric Production** •Overview of fabric production processes. •Classification of fabrics: woven, knitted, and non-woven. •Historical development and advancements in fabric production technology.	06
II	**Yarn Manufacturing** •Spinning processes (ring spinning, open-end spinning) •Yarn types and properties (staple yarns, filament yarns) •Yarn count and twist •Properties and quality control of yarns.	06
III	**Weaving** • Basics of weaving: warp and weft, loom types. • Weave structures: plain, twill, satin, and complex weaves along with examples of fabrics made from them. • Weaving machinery and technological advancements. • Common weaving defects and their remedies. • Fabric defects	06

IV	**Knitting** • Types of knitting: weft knitting and warp knitting. • Knitting machines: circular and flatbed knitting machines. • Knit structures and their properties. • Common knitting defects and solutions. Knitting calculations	06
V	**Non-woven Fabrics** • Introduction to non-woven fabrics and their applications. • Manufacturing processes: spun bond, melt blown, needle punch, and hydro entanglement. • Properties and quality control of non-woven fabrics.	06
Practical:	• Preparation of yarn samples using spinning and twisting techniques. • Visit to Knitting Industry and prepare a report on knit fabric properties and identification of common defects. • Prepare a scrap book of different kind of yarns, fabrics made from different weaves, samples of non woven fabrics and defected fabrics along with detailed description.	60

Suggested Readings:

- Ajgaonkar, D.B. (2006). Knitting Technology. (2nded.). Mumbai: UniversalPublishing Corporation.
- Albrecht, W., Fuchs, H., &Kittelmann, W. (Eds.). (2006). Nonwoven Fabrics: Raw Materials, Manufacture, Applications, Characteristics, Testing Processes. New Jersey: Wiley & Co.
- Albrecht, W., Fuchs, H., &Kittelmann, W. (2003). Nonwoven fabrics. Weinheim: Wiley-VCH.
- Aswani, K. T. (1986). Plain Weaving Motion. Ahmadabad: Textile Trade press.
- Broudy, E. (1979). The Book of Looms: A History of the Handloom from Ancient Times to the Present. : New York: University Press of New England.
- Emery, I. (2009). The primary structures of fabrics an illustrated classification. London: Thames & Hudson.
- Fannin, A. (1998). Handloom Weaving Technology. Michigan: Van Nostrand Reinhold
- Grosicki, Z. (2004). Watson's Advanced Textile Design. (7th ed.). Cambridge: Woodhead Publishing Ltd.
- Nisbet, H. (1978). Grammar of Textile Design. Bombay: Taraporewala Sons and Co.
- Russell, S. J. (2007). Handbook of nonwovens. Boca Raton: CRC Press
- Spencer, D.J. (2001). Knitting Technology. (3rd ed.). Cambridge: Woodhead Publishing Ltd.S. (2002). Fabric. London: Mitchell Beazley.
- Wynne, A. (1997). Textiles- Motivate Series. London, Macmillan Education Ltd.

UNDERSTANDING FABRICS

Programme- B.Sc. Home	**Year: 3rd**	**Semester:5th**

Science		

Course Description:

Course Code: B.ScHS-503B(CT)	**Course Title : Understanding Fabrics**

Course Objective:

- To brieflystudythe fabriccomponents.
- Toenhanceawarenessof variouscommerciallyavailablefabrics
- Tounderstandthepropertiesandend usesofthevarioustypesoffabrics

Course Outcomes:

- Understandthe componentsofatextilefabric.
- Identifythevariouscommerciallyavailablefabrics.
- Appropriatelyselectfabricsbasedontheirproperties,costandrecomme ndedenduse.

Credits: 2+2	**Course Type: DSE**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Fabriccomponents** • Fibresand yarns • Methodsoffabricconstruction • Fabricfinishing-dyeing,printing,aestheticandfunctionalfinishes	10
II	**Commercially Important Woven Fabrics: Identification, properties, end use** • CottonandotherCellulosicFabrics • SilkandWoolfabrics • Man-madefibreandblendedfabrics	10
III	**Commercially Important Knitted and Non Woven fabrics: Identification, properties and end use** • Knitted fabrics – Knitted Terry, Jersey, Rib Knit, Interlock knit, Pique • Non Wovens • Others – Suede, nets, laces	5
IV	**TraditionalIndianFabrics:Identification,propertiesande nduse** • Selectedwoven, embroidered,painted,printedand dyedtraditional Indiantextiles.	5
Practical:	• Identification of various types of fibres,yarns, fabrictypes (woven,	60

	knitted,non-wovensand others), weaves,threadcount andfabricweight • Collectionofswatchesforportfolio preparationofwoven,knitted,non-wovenandtraditionalIndian fabrics	

Suggested Readings:

- CorbmanP.B.,(1989),Textiles-FibretoFabric,6thedition,McGrawHill,NewYork.
- HollenN.,SaddlerJ.,LangfordA.L.,KadolphS.J.,(1988),Textiles,6th Edition,Macmillan PublishingCompanyNewYork, USA
- Joseph,M.L.,(1988)EssentialsofTextiles(6thEdition),Holt,RinehartandWinstonInc., Florida.
- Rastogi,D.(Ed.)andChopra,S.(Ed.),(2017),TextileScience,OrientBlackSwan.
- SekhriS.,(2011)TextbookofFabricScience:FundamentalstoFinishing,PHILearning,Delhi
- Pizzuto'sJ.J."FabricScience", FairchildPublication,NewYork.
- TholiaA.,(2013)UnderstandingFabrics-ApracticalApproach,2nd edition,SarvInternational.
- Das,Shukla,1992,FabricArt-HeritageofIndia,AbhinavPublications,N Delhi
- ChelnaDesai,1988, IkatsTextilesofIndia,ChronicleBooks,India.

ENTREPRENEURSHIP DEVELOPMENT AND ENTERPRISE MANAGEMENT

Programme- B.Sc. Home Science	Year:III	Semester:V
Course Description: Entrepreneurs are innovators who help improve technology, products and society. Apart the economic growth of any country, the contribution of manufacturing and service play an important role. The purpose of exposing students to entrepreneurship is to motivate them to look at entrepreneurship as a viable and preferred career and emerge as job.		
Course Code: B.ScHS-503A(RM)	**Course Title: Entrepreneurship Development and Enterprise Management**	
Course Objective: ● Initiate entrepreneurial motive and impart skills and capabilities for entrepreneurship ● Comprehend nuances of entrepreneurship ● Gain knowledge on Governmental plans and programs ● Ignite/kindle aspirations to become entrepreneurs and successful managers ● To develop the entrepreneurship, employability through skill development in the context of competency.		
Course Outcomes: ● Understand the concept of entrepreneurship, entrepreneur and enterprise ● Identify ways to approach supportive Institutions and Banks for starting an enterprise ● Analyze the steps in product selection and form of ownership ● Focus on the formation of project proposal and practice effective accounting processes		
Credits: 2+2		**Course Type- DSE**
Max. Marks: 100+50		**Min. Passing Marks: 40+20**
Total No. of Lectures: Theory(30)+Practical(60)		

Units	Topic	No. of Lectures
I	**Unit-1. Concept of Entrepreneurship** ● Conceptual - meaning, definition and scope of entrepreneurship ● Entrepreneur- meaning, qualities, functions and types of entrepreneurs ● Enterprise - Definition, nature and classification ● Forms of Organization - Sole proprietorship, partnership, Joint Stock Company ● Role of entrepreneur in economic development	**5**
II	**Unit-II. Establishing a Small-Scale Enterprise** ● Concept and Classification - Product identification and product selection ● Infrastructure-Plant Location, Land, building, water and power ● MS-Man power, method, machine, material, marketing, mother nature ● Preparation of case studies of successful entrepreneur	**5**
III	**Institutional Support** ● Commercial Bank Central level ● SSIB-Small scale Industries Board ● NSIC-National Small Industries Corporation ● SIDO-Small Industries Development ● Organization KVIC - Khadi and Village ● Industries Commission	**10**

	● NIESBUD-National Institute for Entrepreneurship and Small Business Development ● NABARD - National Bank for Agricultural and Rural Development State Level ● DIC-District Industrial ● Centre SFC-State Finance Corporations ● SSIDC-State Industrial Development ● Corporation SIDBI-Small Scale Industrial ● Development of India SISI-Small Industries Service Institutes ● ICICI- Industrial Credit Investment Corporation of India ● Visit to financial and supportive Institution to understand or observe their action modalities ● Lectures on the rules and regulation for financial support to entrepreneurs	
IV	**Project Formulation** ● Meaning and definition of project ● Sectoral project, Techno economic project ● Project report and preparation of project report ● Project appraisal market feasibility, technical feasibility, financial and economic feasibility ● Carryout market survey ● Accounting for Small Enterprises ● Meaning, need and objectives of accounting ● Process of Accounting, Book Keeping, Journal, Ledger and Balance Sheet, Final Accounts ● Auditing-nature and types ● Preparation of model project, proposal and report	**10**
Practical	• Project work based on the market survey of any enterprise to study infrastructure, hierarchy, services and output to learn and understand how an enterprise works • MicroLab • SWOCanalysisofsuccessfulentrepreneursandenterprisesthroughcaseprofiling. • EntrepreneurialCompetencies&Motivation-Simulations&experiential learning. • InstitutionsfacilitatingentrepreneurshipdevelopmentinIndia. • Preparationandappraisalof abusinessplan. • CalculationsoffinancialIndices. • Designanddevelopment ofmarketingmixfor astartup. • Designingof salescampaign fordigital marketing	**60**

Suggested Readings:

- Anilkumar, S. Poornima S.C. Mini K. Abraham and Jayashree, K. (2012). Em Badi, R. V. and Badi N. V. (2011), Entrepreneurship. New Delhi: Vrinda Publications Pvt. Limited
- Gordon, E., and Natarajan, K. (2013), Entrepreneurship Development. Mumbai: Himalaya Publishing House

- Jayashree Suresh. (2016). Entrepreneurial Development. Chennai: Margham Publication
- Khanka, S.S. (2006). Entrepreneurial Development. New Delhi:S. Chand and
- Company Limited Radha, V. (2015). Entrepreneurial Development. Chennai: Prasanna Publishers and Distributors
- Robert, N.A. Hawkins, F. Kernelt, A. (2009). Accounting. New Delhi: Tata Me Graw -Hill Publishing Company Limited Sandara Painting, Co2002). Entrepreneurship Development. Virudhunagar: M.M. Publishers
- BarringerR.B.(2020).*Entrepreneurship:SuccessfullyLaunchingNewVentures*(6eed.).PearsonEducation.
- ChabbraT.N.(2015).EntrepreneurshipDevelopment.NewDelhi:SunIndia.
- Charantimath,P.M.(2018).EntrepreneurshipDevelopmentandSmallBusinessEnterprises.PearsonPublications.
- DesaiV.(2011).TheDynamicsofEntrepreneurialDevelopmentandManagement.HimalayaPublishingHouse.
- GundryL,K.&KickulJ.R.(2007).EntrepreneurshipStrategy:ChangingPatternsinNewVentureCreation,Growth,and Reinvention. SAGEPublications, Inc.
- Taneja&Gupta.(2001).EntrepreneurDevelopment-NewVentureCreation.NewDelhi:GalgotiaPublishingCompany.
- Zaware,N.(2019).EntrepreneurshipDevelopmentandStartupsManagemen.EducreationPublishing.

DESIGN, THINKING AND INNOVATION

Programme- B.Sc. Home Science	Year: 3rd	Semester: 5th

Course Description: The focus of the unit would be on understanding the theoretical concepts related to innovation, design and creativity. The unit focuses on studying the various methods and techniques used for design innovation. The unit attempts to acquaint the students with contemporary techniques and approaches for integrating concepts of sustainability in design. This unit will develop competence amongst students towards creating and executing their innovative design ideas.

Course Code: B.ScHS-503B(RM)	Course Title: Design, Thinking and Innovation

Course Objective:

- To sensitize students towards innovation in design to improve the quality of life of users as well as comply with environment protection.
- To stimulate the students to engage in creativity and integrate sustainability in their design endeavors'.

Course Outcomes:

- The student will be able to get sensitized towards innovation and creativity through innovative and sustainable design practices and techniques.
- The student will be able to carry out development of product and prototyping from a sustainability perspective.
- The student will be able to brainstorm new product ideas in a systematic manner.

Credits: 2+2	Course Type- DSE
Max. Marks: 100+50	Min. Passing Marks: 40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Unit I: Introduction to Innovation in Design** ● Concept of Design, Innovation, and Creativity ● Theories and principles of design and innovation ● Challenges to innovation	10
II	**Unit II: Methods and techniques for Innovation in Design** ● Understanding disruptions in innovation approaches, case analysis ● Process of creativity and design ● Methods of ideating, creating and implementing innovative design ideas	10
III	**Unit III: Approaches for Sustainability in Design** ● Role of sustainability in design practice ● Emerging trends and sustainable methods and techniques of design ● Sustainable Materials: reclaimed and eco-friendly composite materials ● Contemporizing traditional designs ● Circular Economy as a pathway to sustainability in design	10

Practical	**Prepare a small project showing: -** Critical evaluation of existing designs: Products**,** Interiors and Space Case study of Innovative design practices related to: Interiors, Space and Products	**60**

Suggested Readings:

- Brown, T. (2019). Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation. ISBN-13: 9780062856623
- Soni, P. (2020) Design Your Thinking: The Mindsets, Toolsets and Skill Sets for Creative Problem-solving.
- Jones, J. C. Design Methods. ISBN-13: 978-0471284963
- Ashby, M.F, Johnson, K. Materials and Design: The Art and Science of Material Selection in Product Design.
- Allwood, J, Cullen, J. (2011). Sustainable Materials.
- Desai, A, Mital, A. Sustainable Product Design and Development. ISBN: 9780367343217
- William McDonough and Michael Braungart (2002). "Cradle to Cradle: Remaking the Way We Make Things", North Point Press, New York.
- LanceHosey,(2012)."TheShapeofGreen:Aesthetics,Ecology,andDesign",IslandPress,Washington , D.C.
- Norman,A.D.TheDesign ofEverydayThings:Revised andExpandedEdition.
- Kaptelinin,V.AffordancesandDesign.
- Pivot.FromConcepttoProductLaunch:AguidetoProductDevelopment.
- Monto Mani and Prabhu Kandachar (Eds) (2015), "Design for sustainable well-being andempowerment:SelectedPapers",IISc,Bangalore andTUDelft, TheNetherlands.
- Papanek,V.(1984),"DesignfortheRealWorld",2ndEdition,London:Thames&Hudson.
- WhiteLemon,"365DaysofDIY",CreateSpace IndependentPublishingPlatform,2016.
- Jaffe,S.Bet.al.(2020). SustainableDesignBasics.

BASICS IN RESEARCH

Programme: **B.Sc. Home Science**	**Year: III**	**Semester: V**

Course Objectives

- Students should understand a general definition of research design.
- Students should know why educational research is undertaken, and the audiences that profit from research studies.
- Students should be able to identify the overall process of designing a research study from its inception to its report.
- Students should be familiar with ethical issues in educational research, including those issues that arise in using quantitative and qualitative research.
- Students should know the primary characteristics of quantitative research and qualitative

Course outcomes:

- Search for, select and critically analyze research articles and papers
- Prepare a literature review
- Formulate and evaluate research questions
- Develop a research proposal or industry project plan
- Gain experience with instrument development and data collection methods
- Gain experience with ethics proposals

Course Code:B.ScHSGE-2	Course Title: Basics in Research

Credits: 3	**Course Type: Generic Elective**
Max. Marks: 100+50	**Min. Passing Marks**: 40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No of Lectures
I	**Research- Meaning, Purpose And Approaches** • Exploration, Description, Explanation • Scientific method and research • Research Designs –Experimental and Observational • Quantitative and Qualitative approaches	**5**
II	**Sampling and Tools** • Role of sampling in research • Types of sampling **Research Tools and Techniques** • Validity and reliability • Interviewing and observational methods	5
III	**The Research Process** • Defining the problem, research questions, objectives, hypotheses • Review of related literature and originality in writing • Planning the research • Subjects context and ethics • Methodology and tools • Citation formats: in medical sciences, social science	**10**
IV	**Conceptualization And Measurement**	**10**

	• Variables, concepts and measurement • Levels of measurement • Units of analysis	
Practical	**Preparation of project in context of the following points-** • Selection of the research topic • Objectives • Research Design • Sampling design and size • Selection/ Development of tools for data collection, e.g. Questionnaire, Interview Schedule, Observation, Rating Scale etc. • Statistical Analysis • References and Citations (APA Style, 6th Edition) • Presentation of Research Work	**30**

Suggested Readings:

- Kumar, R. (2005).*Research Methodology: A Step by Step Guide for Beginners*. Sage Publications, New Delhi.
- Kerlinger F. N. and Lee, H.B. (2000).*Foundations of Behavioural Research* 4th Ed. HarcourtCollege Publishers
- Kothari, C. R. (2008).*Research Methodology: Methods and Techniques* 2nd Ed. New AgeInternational Pvt Ltd, New Delhi.
- Black, J.A. & Champion, D. J. (1976).*Methods and Issues in Social Research*. New York: JohnWiley and Sons.

B.SC. HOME SCIENCE , III YEAR, VI SEM

TRADITIONAL INDIAN TEXTILES

Programme- B.Sc. Home Science	**Year: III**	**Semester: VI**

Course Description:

This course immerses students in India's vibrant textile heritage, fostering an appreciation for

its richness while equipping them with essential skills in textile conservation and storage fundamentals. Students will gain expertise in identifying embroidered fabrics from different states, understanding traditional woven fabrics, and appreciating dyed, painted, and printed textiles. Practical training in conservation techniques will prepare them for preserving and caring for these textiles. Additionally, insights into the socio-economic significance of khadi, handloom, and handicraft sectors, alongside interventions for their sustainability, will empower students to pursue careers in textile conservation, cultural preservation, and heritage management, bridging past traditions with contemporary practices in the textile arts.

Course Code: B.ScHS-601	**Course Title:Traditional Indian Textiles**

Course Objective:

- To create awareness and foster appreciation of the country's rich textile heritage
- To impart knowledge of fundamentals of textile conservation and storage
- To acquaint students about the khadi, handloom and handicrafts sectors and measures taken by various organisations for their sustenance

Course Outcomes:

- Recognise and identify embroidered fabrics of different states in terms of stitches and designs
- Explain material and design of selected traditional woven fabrics.
- Describe our heritage of varied dyed, painted and printed fabrics.
- Classify conservation techniques and recognise signs of deterioration of textiles.
- Carry out care and conservation of traditional textiles.
- Provide an insight into the evolution and socio-economic significance of khadi, handloom and handicraft sectors.
- Discuss sustenance of traditional textile crafts and interventions by organisations.
- Analyse the textile arts in their historical perspective, the impact of modernisation and their contemporary status

Credits: 3+2	**Course Type: DSC-1**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(45)+Practical(60)

Units	Topic	No. of Lectures
I	**Study of Textile Crafts of India: with reference to history, production centers, designs, materials, colours and products.** • Woven Textiles - Banaras Brocades, Jamdanis and Baluchars of Bengal, Kani Shawls of Kashmir, Kanjivarams of Tamil Nadu • Embroidered Textiles-Kanthas of Bengal, Kasuti of Karnataka, Phulkari of Punjab, Chikankari of Uttar Pradesh, Kashida of Kashmir, Gujarat embroideries	15

II	**Study of Textile Crafts of India: with reference to history, production centers, designs, materials, colours and products.** • Painted and Printed textiles –Kalamkaris of Andhra Pradesh, Dabu printing of Rajasthan, • Ajrakh printing of Gujarat • Dyed textiles –Bandhnis of Rajasthan and Gujarat, Ikats- Patola of Gujarat, Bandhas of • Orissa, Telia Rumal of Andhra Pradesh	15
III	**Status of Traditional Textiles in Modern India** • Evolution and socio-economic significance of Khadi, Handloom and Handicraft sector • Sustenance of traditional textile crafts • Interventions by organizations	10
IV	**Conservation of Traditional Textiles** • Types of Conservation – Preventive and Curative • Factors influencing degradation of textiles • Care and storage techniques	5
Practical:	1. Resist Dyeing Techniques a) Tie & dye using various techniques on cellulosic and protein fibers b) Batik on cotton 2. Printing a) Block printing: pigment b) Screen printing: pigment 3. Embroidery stitches of traditional embroideries 4. Portfolio development-Traditional textile crafts. 5. Product development 6. Visit to craft centers/museums: Craft documentation report on any one craft	60

Suggested Readings:

1. Agarwal, O.P., 1977, Care and Presentation of Museum projects – II, NRL
2. Barnard, N., Gillow, J., 1993, Indian Textiles, Thames and Hudson, USA
3. Chattopadhaya, K.D., 1995, Handicrafts of India, Wiley Eastern Limited, N Delhi
4. Crill, R., 2015, The Fabric of India, Victorial and Albert Museum, UK
5. Das, Shukla, 1992, Fabric Art- Heritage of India, Abhinav Publications, N Delhi.
6. Grundy & Northedge, (1998) Standards in the Museum Care of Costume and Textile Collections, Museums & Galleries Collection, Spin Offset Limited, Chapter 7-14, pg 35-54
7. Mausumi Kar, (2015), The Indian Textile and Clothing Industry An Economic Analysis, Springer New Delhi Heidelberg New York Dordrecht London, Chapter 1& 2, pg 12-33.
8. Pandit Savitri, 1951, Indian Embroidery- Its Variegated Charm, Pandit Publisher, Baroda Embroidery tutorials, video links of woven textiles and slide share.

EXTENSION FOR DEVELOPMENT

Programme- B.Sc. Home Science	Year: III	Semester: VI
Course Description:		
Course Code: B.ScHS-602	**Course Title : Extension for Development**	
Course Objective: • Toenablethestudents tograspttheconcept ofextensionand itsroleindevelopment. • To gain knowledge and application of principles and processes involved in ExtensionProgrammePlanningandManagementincludingcommunitymobilizationa ndstakeholderparticipation.		

- TounderstandtheprinciplesandprocessofExtensionProgrammeDesignandManagement.
- To develop understanding and skills in planning participatory approaches in ExtensionProgrammeManagement.
- To inculcate a thorough understanding of the dynamic nature of extension programmesbased on the changing needs of society as well as critical appraisal of the presentlyoperatingextension programs in thecountry.

Course Outcomes:

- Learn abouttheconceptandscopeofextensioninnationaldevelopment.
- Developanunderstandingoftheprinciplesandprocessinvolvedinprogrammedesignandmanagement.
- Developskillsforusingparticipatoryapproachesinprogrammemanagement.
- Gainknowledgeforvariousdevelopmentschemesandprogrammesoperatingatthenationallevel.

Credits: 3+2	**Course Type: DSC-2**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(45)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**Extension:ConceptandPrinciples** • Extension:concept,goals,philosophy,historyandscope • TypesofextensionandapproachestoExtension • PrinciplesofAndragogy; Andragogyvs.Pedagogy • Principlesofextension • Relationshipbetweencommunicationandextension-roleofextensionindevelopment • MethodsofcommunitycontactinExtension	10
II	**Participation&LeadershipforCommunityDevelopment** • StakeholdersinExtensionprograms • People'sparticipationandsocialmobilizationin development,levelsofparticipation • Participatory Learning and Action – concept, principles, classification of tools andtechniques • Leadersinextension– functions,typesandleadershipstylesandtheories • Diffusionofinnovationand adoption –concept, theoryand application	10
III	**ProgrammeManagement** • Projectcycle-goals,objectives,indicators,outputsandoutcomes • ConceptandPrinciplesofextensionprogrammanagement • Modelsofextensionprogrammemanagement-	10

	overviewofmodels,Sandhu'smodel,Logicmodel • Monitoringand evaluation	
IV	**DevelopmentProgrammes** • Developmentissuesandgoals-nationalandinternationalperspectives,SustainableDevelopmentGoals • Contemporary National Development Programmes (related to education, employment,income,healthandnutrition,digitalization andwomen)– objectives,targetgroups,salientfeatures,monitoringand evaluation,outcomes,stakeholders,partnershipandfunding	15
Practical:	1. ApproachestoAdultEducation 2. Developskillsinplanningandusingindividualandsmallgroup methodsinextension 3. UnderstandingtheuseofPLAas need assessmenttools 4. Assessingtheleadershipskillsinacase-studyformat	**60**

Suggested Readings:

- Beck,S.,2020,Communicationinthe2020s.Routledge.
- Kumar,S.,2002,Methodsforcommunityparticipation:acompleteguideforpractitioners.VistaarPublications, NewDelhi.
- RayG.L.,2015,Extension,CommunicationandManagement,KalyaniPublications,NewDelhi.
- Sandhu,AS.,2018,ExtensionProgrammePlanning.OxfordandIBHPublishers,NewDelhi.
- Singh,S.,2022,ABriefBookonExtensionEducation.NewVishalPublications,NewDelhi.
- Singh,AK.,2020,FrontlineExtensioninIndia InnovationsandReforms.BiotechPublisher,NewDelhi.
- Supe, SV., 2019,AnIntroduction toExtension Education.Oxford&IbhPublishingCo. PvtLtd,NewDelhi.
- Bhatnagar.O.P&Dahama,O.P.,2009,EducationandCommunicationforDevelopment2ed.Oxford& IBHPublishingCo. PvtLtd, NewDelhi.
- DaleR.,2004,EvaluatingDevelopmentProgrammesandProjects.SagePublications,NewDelhi.
- Kumar&Hansra,2000,ExtensionEducationforHumanResourceDevelopment.ConceptPublishingCompany, NewDelhi
- Mikkelsen,B.,2002,MethodsforDevelopmentWorkandResearch.SagePublications,NewDelhi.

Space Design and Sustainability

Programme- B.Sc. Home Science	Year: III	Semester:VI
Course Description:		
Course Code: B.ScHS-603	**Course Title : Space, Design, and Sustainability**	
Course Objective: • Tounderstandthefundamentalsofspaceplanning. • Toacquireknowledgeregardingmaterials,buildingconstructiontechniquesandtechnologies. • Tocomprehendsustainableparametersinspacedesign.		
Course Outcomes: • Comprehendtheconceptofdesignapplicabletointeriorspaces. • Understandtheapplicationofmaterialsandfinishestocreateaestheticandsustainableinteriors • Comprehendtheconceptofsustainabilityandgreenratingsystems		
Credits: 3+2		**Course Type: DSC-3**
Max. Marks:100+50		**Min. Passing Marks: 40+20**

Total No. of Lectures:Theory(45)+Practical(60)		
Units	**Topic**	**No. of Lectures**
I	**BasicConcepts inSpacePlanning** • Conceptofspaceasaresource,characteristicsofspace • Principlesofplanningspaces • Zoning • Typesofhouses: IndependenthousesandApartments. • ContemporaryHousing-ServiceApartments,Seniorliving. • Buildingbye-laws–NBCand MPD	10
II	**ConstructionFeaturesinBuildingDesign** • Siteselection • ConventionalandNon-conventionalbuildingmaterials,sustainablebuildingmaterials • Structuralcomponentsofabuilding(MaterialandTypes)–Foundation,Walls,Flooring,Roofs,Doors and Windows, Staircase. • Basicbuildingservices • Landscaping • Earthquakeresistantstructures • HomeAutomation	15
III	**Conceptof SpaceDesign** • IntroductiontoElementsandPrinciplesofdesign • ConceptofColourinInteriorDesign-ColourTheories, • EnergyEfficient LightingSystems • Furniture-Types,Selectioncriteria,Arrangement • Furnishings-HomeFurnishing,Windowtreatment,FloorCoverings • Walltreatment • Useofsustainablematerialinspacedesign	10
IV	**Sustainablebuiltenvironment** • Introductiontosustainablebuiltenvironment • GreenbuildingratingguidelinesinIndia–GRIHAandLEED • ConceptofSmartCities	10
Practical:	1. Introduction to building terminologies, Concept of Scale, building	60

	constructionssymbols 2. Evaluationoffloorplansonthebasisofprinciplesofspaceplanning 3. Preparationoffloorplans • Multipurposerooms/studioapartment(Computer aided/manual) 4. Identificationand characteristicsofdifferentbuildingmaterials 5. CasestudyofaGreenBuilding 6. Projecton Landscaping/ HomeAutomation	

Suggested Readings:

- GoelS.,SeetharamanP.Kakkar,A.(2015).*ManualonInteriorspacedesigning,*Elitepublishers.
- Goldstein,H.&Goldstein,V.(1988).*ArtinEverydayLife(4thed.),*Oxford&IBHPublishingCo.
- IndianGreenBuildingCouncil.(2022).*IntroductiontoGreenBuildingsandBuiltEnvironment,*BSP Books.
- Kumar,S.(2008).*BuildingConstruction,*StandardPublisher.
- Rao,M.P.(2020).*InteriorDesignPrinciplesandPractices,*StandardPublishersDistribution.
- DuggalS.K.(2017).*BuildingMaterials*.CRCPress.
- GreenRatingforIntegratedHabitatAssessment(GRIHA).(2021).*GRIHAManuals,*GRIHACouncil.
- Grimley,C.andLove,M.(2018).*TheInteriorDesignReference&SpecificationBook,*RockportPublishers.
- IndianGreen BuildingCouncil.(2021).*IGBCManuals,*IGBC.
- Iyer,G.H. (2022).*Green BuildingFundamentals,*NotionPress.
- Mitton,M.andNystuen,C.(2021*).ResidentialInteriorDesign:AGuidetoPlanningSpaces(4th ed.),* Wiley.
- Singh,G.(2019).*BuildingConstructionandMaterials,*StandardPublishers.

RESEARCH METHODS IN HOME SCIENCE

Programme- B.Sc. Home Science	**Year:III**	**Semester: VI**
Course Description: Students will be able to learn and understand the concept of research in detail. Student will learn and understand the application of research in day to day life.		
Course Code: B.ScHS-604A	**Course Title: Research Methods in Home Science**	
Course Objective: • To compare and contrast quantitative and qualitative research approaches • To identify appropriate sampling methods, measurement scales and tools of data collection and appropriate uses of each • To demonstrate knowledge of the key steps of a research process in both experimental and observational research		
Course Outcomes: • Compare and contrast quantitative and qualitative research approaches • Identify appropriate sampling methods, measurement scales and tools of data collection and appropriate uses of each • Demonstrate knowledge of the key steps of a research process in both experimental and observational research		
Credits: 2+2	**Course Type- DSE**	
Max. Marks: 100+50	**Min. Passing Marks: 40+20**	
Total No. of Lectures: Theory(30)+Practical(60)		

Units	Topic	No. of Lectures
I	**UNIT I: Research- Meaning, purpose and approaches** ● Exploration, Description, Explanation ● Scientific method and research ● Quantitative and Qualitative approaches ● Research Designs –Experimental and Observational ***Conceptualization and Measurement*** ● Variables, concepts and measurement ● Levels of measurement ● Units of analysis	**10**
II	**UNIT II: Sampling & Tools** ● Role of sampling in research ● Types of sampling ***Research Tools and Techniques*** ● Validity and reliability ● Interviewing and observational methods ● Scales	**10**
III	**UNIT III: The Research Process 20** ● Defining the problem, research questions, objectives, hypotheses ● Review of related literature and originality in writing ● Planning the research ● Subjects context and ethics ● Methodology and tools ● Data reduction, analysis and representation ● Citation formats: in medical sciences, social sciences	**10**
Practical	• Probability and Non Probability sampling methods • Designing data collection tools and planning their analysis: Indepth interviews, questionnaire, FGDs, Case studies • Data collection process: conducting interviews, FGDs, case studies • Codingandtabulationof datafor analysis • CitationformatsandPlagiarism • Reviewingaresearchpaperfromaspecific areaofspecializationinHomeScience	**60**

Suggested Readings:

- Kerlinger F. N. and Lee, H.B. (2000) *Foundations of Behavioural Research 4th Ed*. Harcourt College Publishers
- Kumar, R. (2005) *Research Methodology: A Step by Step Guide for Beginners*. Sage Publications, New Delhi.
- Ramamurthy, G.C., (2011*), Research Methodology*, Dreamtech Press India Private Limited, New Delhi.
- Black, J.A. and Champion, D. J. (1976) *Methods and Issues in Social Research*. New York: John Wiley and Sons.
- Kothari, C. R. (2008) Research *Methodology: Methods and Techniques 2nd Ed.* New Age International Private Ltd, New Delhi.

INNOVATION AND ENTREPRENEURSHIP

Programme- B.Sc. Home Science	Year: III	Semester: VI

Course Description-

The basic objective of this course is to help the learners understand various issues involved in setting up a private enterprise and develop required entrepreneurial skills in economic development. It also aims to motivate students to opt for entrepreneurship and self-employment as alternate career options. Students acquire the knowledge and skills needed to manage the development of innovations, to recognize and evaluate potential opportunities to monetize these innovations, to plan specific and detailed methods to exploit these opportunities, and to acquire the resources necessary to implement these plans.

Course Code: B.ScHS-604B	Course Title: Innovation And Entrepreneurship

Course Objective:

- The student must learn and understand the core concept of innovation and entrepreneurship.
- Student must learn how to start their own startup through applying innovative methods.
- To develop the entrepreneurship, employability through skill development in the context of competency in field of entrepreneurship.

Course Outcomes:

- Entrepreneurial process of creating new businesses
- Role of Creativity and innovation in Entrepreneurial start-ups
- Manage family-owned companies
- Context of social innovation and social entrepreneurship and
- issues and practices of financing entrepreneurial businesses., and
- live cases of social , techno, women entrepreneurs along with visit and interaction with entrepreneurship development institutes in India,
- It helps the participants in learning basic fundamentals of decision making towards establishing enterprises in real life situations. This course is intended to be a foundation course for those who plan to work and start a business enterprise.

Credits: 2+2	**Course Type- DSE**
Max. Marks: 100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Introduction** • Introduction to Entrepreneurship & social Entrepreneurship • Fundamentals of Innovation & Go to market thinking • The Entrepreneurial mind-set • Corporate entrepreneurship • Generating and exploiting new entries • Social impact innovation save world	**10**
II	**Entrepreneurship** • Concept • Theories • Characteristics • Entrepreneurial mindset • Innovation and creativity- meaning • Types of innovations, features, and need. • Creativity : need and significance Latest innovations in manufacturing and service sectors. • Social and commercial entrepreneurship. • Types of entrepreneurships, • Women Entrepreneurship- Problems Faced, Suggestions, • Role of Government to promote Women Entrepreneurship.	**10**
III	**Innovation** • Centre of Innovation, • Incubation and Entrepreneurship- An expert Interview, Entrepreneurship: Role of stimulating creativity , Creative teams and managerial responsibilities ,Innovation and entrepreneurship:, • Creativity and Innovations in Start Ups. • Case studies of entrepreneurship, innovation and creativity.	**10**
Practical	• To design and develop an enterprise model and define its goals, functioning, management and product with logo.	**60**

Suggested Readings:

- Soni,Pwan.(2020).Designyourthinking:TheMindsets,toolsetsandskillsetsforcreativeproblemsolving
- Kahneman,Daniel.(2011).Thinkingfastandslow

- Drucker,P.F.(2006).Innovationandentrepreneurship:Practiceandprinciples.USA:Elsevier.70
- Roy,R.(2008)Entrepreneurship.NewDelhi:OxfordUniversityPress
- Operations Management: Process and Supply Chains, Eleventh Edition, Lee J. Krajewski, Manoj K. Malhotra, Larry P. Ritzman & Samir K. Srivastava, Pearson.
- Heizer, H., & Render, B. (11th e). Principles of operations management. Pearson Education.
- Stevenson, W. J., Hojati, M., Cao, J., Mottaghi, H., & Bakhtiari, B. (2007). Operations McGraw-Hill Irwin.

B.Sc. Home Science
VII Semester
Statistics and Computer Application

Programme- B.Sc. Home Science	**Year: First**	**Semester:VII**
Course Description: Statistics and Computer Application is designed to introduce students to fundamental statistical concepts and the use of computer software for data analysis. The course covers topics such as descriptive and inferential statistics, probability, hypothesis testing, and data interpretation. Students will also learn to apply statistical tools using software like SPSS or Excel. By the end of the course, they will be able to analyze and present data effectively for research and decision-making.		
Course Code:B.ScHS-	**Course Title : Statistics and Computer Application**	
Course Objective: 1. To introduce students to the fundamentals of statistics and its applications in various fields. 2. To familiarize students with computer applications and software used for statistical analysis. 3. To develop students' skills in data collection, organization, analysis, and interpretation. 4. To enable students to apply statistical techniques and computer applications to solve real-world problems.		

Course Outcomes:

1. Students will gain a basic understanding of statistical concepts and principles, such as probability, hypothesis testing, and data visualization.
2. Students will become proficient in using computer applications and software, such as Microsoft Excel or statistical software packages, for data analysis and interpretation.
3. Students will acquire the skills to collect, organize, and analyse data using appropriate statistical techniques, and interpret the results accurately.
4. Students will be able to apply statistical knowledge and computer applications to real-world scenarios, making informed decisions and solving problems effectively.

Credits: 3+1	**Course Type:DSC**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(45)+Practical(15)

Units	**Topic**	**No. of Lectures**
I	**UNIT I: INTRODUCTION TO STATISTICS** ● Orientation to qualitative and quantitative analyses ● Introduction to quantitative procedures ● Basic principles and concepts in statistics	5
II	**UNIT II: MEASUREMENT AND COMPUTATION** ● Fundamentals of measurement: quantity and quality ● Scales of measurement: Nominal, ordinal, interval and ratio ● Reliability, validity and standardisation of measurement	5
III	**UNIT III: ORGANISATION AND PRESENTATION OF DATA** ● Data Reduction Strategies, Coding and tabulation ● Grouping of data: Frequency distributions ● Graphic representation: Graphs, diagrams and charts ● Descriptive Statistics Mean, Mode, Median, SD, SE and its Applications ● Applications of Descriptive Statistics ● Percentage, Percentile Ranking and Frequencies	**5**
IV	**UNIT IV: PROBABILITY AND NORMAL DISTRIBUTION** ● Basic principles and applications of probability ● Characteristics of Distributions: Skewness, Kurtosis	5

	● Testing hypotheses: Levels of significance and estimation ● Errors in hypothesis testing: Type I, Type II ● Sampling theory and method ● Z scores, calculation and application	
V	**UNIT V: PARAMETRIC AND NON-PARAMETRIC TESTS** ● Parametric tests of difference: Z-test, F-test, t-test, ANOVA and post hoc analysis of significance ● Parametric tests of association: Pearson's product moment '*r*' ● Non-parametric tests of difference: Mann-Whitney U test, Sign test, and Kruskal-Wallis test ● Non-parametric tests of association: Spearman's r ● Chi-square test: Goodness to fit, Independence of attributes 2x2 and rxc contingency tables.	5
VI	**UNIT VI: EXPERIMENTAL DESIGNS:** ● Reliability, validity and standardization of measurement ● Research design: CRD, RBD, LSD & Factorial Design	**5**
VII	**UNIT VII: REGRESSION AND PREDICTION** ● Correlation ● Regression equation ● Applications of regression	**5**
VIII	UNIT VIII: COMPUTER APPLICATIONS SOFTWARE ● EXCEL ● SPSS	**10**
Practical:	1. Standardise the prepared tool through reliability and validity 2. To tabulate and apply the statistical method on the data collected 3. To represent the data graphically 4. To analyse the data using latest SPSS	15

Suggested Readings:

1. Bernard, H.R. (2000). *Social Research Methods: Qualitative and Quantitative Approaches*. Thousand Oaks, Ca: Sage.
2. Gupta, S.P.: Statistical Methods, Sultan Chand and Company, New Delhi.
3. Elhane,D.N.: Fundamentals of Statistics, KitabMahal, Allahbad.
4. Simpson and Kafka: Basic Statistics, Oxford and IBH Publishers.
5. Goon, Gupta and Das: Fundamentals of Statistics Vol. I and II.
6. Snedecor and Cochran: Statistical Methods, Oxford and IBH Publishers.
7. Shukla,M.C. and Gulshan S.S.: Statistics Theory and Practice, Sultan Chand and Company, New Delhi.

8. Gupta, S.C. and Kapoor V.K.: Fundamental of Mathematical Statistics, Sultan Chand and Company, New Delhi

B.Sc. Home Science
VII Semester
Research Methods in Home Science

Programme- B.Sc. Home Science	**Year: First**	**Semester: VII**

Course Description:

Research Methods in Home Science equips students with the skills to design, conduct, and analyze research in the field of Home Science. The course covers research design, data collection methods, sampling techniques, and both qualitative and quantitative analysis. Students will learn to critically evaluate research and apply methodologies to solve practical problems. By the end, they will be prepared to conduct independent research projects relevant to Home Science disciplines.

Course Code:B.ScHS-	**Course Title : Research Methods in Home Science**

Course Objective:

- Toprovidestudentsunderstandingsaboutthebasicconcepts,approachesandmethodsinconduct ingHomeScienceresearch.
- Toenablelearnerstoappreciateandcritiquethenuancesofdesigningaresearchstudywell.
- Tosensitizestudentstowardsethical concernswhileconductingHomeScienceresearch

Course Outcomes:

- Demonstrateknowledgeofthescientificmethod,purposeandapproachestoresearchinHomeS cience
- `andcontrastquantitativeandqualitativeresearchapproaches
- ExplaindifferenttypesofresearchdesignandtheirapplicabilityinHomeScienceresearch
- Understandthekeyelements ofaresearchprocess
- Explainethicalprinciples,issuesandprocedures

Credits: 3+1	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(45)+Practical(30)

Units	**Topic**	**No. of Lectures**
I	**UNIT I: Research Purpose and Design 10 Hours** This unit will deal with meaning and importance of research in various areas of Home Science. Exposure to different types of research designs and measurement in Home Science research would also be given. ● Meaning, purpose and significance of research ● Research as a scientific method ● Types of research ● Quantitative, Qualitative and mixed method approaches ● Research Designs –Experimental and Non-Experimental; Descriptive and Observational; Participatory research ● Internal and external validity of research design ● Variables, concepts and measurement in research	12

	● Levels of measurement ● Units of analysis	
II	UNITII:SamplingandResearchtools&techniques This unit will introduce the student to the concept of sampling and methods used to draw samplefrom population using examples from Home Science discipline. Students would also learn abouttypesofdata, its collection and reliabilityand validityconcerns. ● Roleofsamplinginresearch ● Samplingtechniquesandtheirapplicability,Samplesizeandsamplingerror ● Types ofdata: Primaryand Secondary ● Tools of data collection; types, construction and administration-Interview,Questionnaire,Observation,Focus groupdiscussionandothermethods ● Validityandreliabilityof datacollectiontools	12
III	UNITII:SamplingandResearchtools&techniques This unit will introduce the student to the concept of sampling and methods used to draw samplefrom population using examples from Home Science discipline. Students would also learn abouttypesofdata, its collection and reliabilityand validityconcerns. ● Roleofsamplinginresearch ● Samplingtechniquesandtheirapplicability,Samplesizeandsamplingerror ● Types ofdata: Primaryand Secondary ● Tools of data collection; types, construction and administration-Interview,Questionnaire,Observation,Focus groupdiscussionandothermethods ● Validityandreliabilityof datacollectiontools	12
IV	**UNIT IV: Values, Social Responsibility and Ethics in Research** This unit will apprise the students about ethical concerns while conducting and reporting research. ● Ethical principles guiding research: from inception to completion and publication of research ● Plagiarism and Academic integrity in research: plagiarism tools and software ● Ethical issues relating to research participants and the researcher ○ Rights, dignity, privacy and safety of participants ○ Informed consent, confidentiality, anonymity of respondents,	12

	voluntary participation, harm avoidance.	
Practical:	1. Datavisualization 2. LevelsofMeasurement 3. Typesofresearchdesigns a. Experimentalandnon-experimental;Descriptiveandobservational b. Qualitative,Quantitativeandmixedmethod 4. Samplingtechniquesand samplesizecalculation a. Probabilitysamplingmethod b. Non-Probabilitysamplingmethods 5. Toolsofdatacollection-Interviewschedule,questionnaireand FGD ● Designing/Construction ● Preparationoftoolsforethicalreview ● Pilottesting/ validityandreliabilityofthetool\ 6. Datacollectionandanalysisprocess:conductinginterviews,administeringquestionnaire 7. Codingandtabulationof datafor analysis 8. CitationformatsandPlagiarism 9. Reviewingaresearchpaperfromaspecific areaofspecializationinHomeScience	

Suggested Readings:

- KerlingerF.N.andLee,H.B.(2017).*FoundationsofBehavioralResearch*4thEd.HarcourtCollegePublishers.
- Kothari,C.R.(2019).*ResearchMethodology:MethodsandTechniques*.NewAgeInternationalPvtLtd, NewDelhi.
- Kothari,C.R.(2022).*Shodh Padhati*1stEd.NewAge InternationalPvt Ltd,NewDelhi.
- Kumar, R. (2019) Research Methodology: A Step-by-Step Guide for Beginners. 5th Ed. SagePublications,NewDelhi.

B.Sc. Home Science

VII Semester

Innovation and Entrepreneurship

Programme- B.Sc. Home Science	**Year: First**	**Semester: V**

Course Description:

Innovation and Entrepreneurship focuses on fostering creative thinking and entrepreneurial skills necessary to st successful ventures. The course covers idea generation, business planning, market analysis, and the develo pmen products or services. Students will explore case studies, engage in hands-on projects, and learn the essentials of fundi business. By the end, they will be equipped to transform ideas into viable entrepreneurial opportunities.

Course Code:	**Course Title: Innovation and Entrepreneurship**

Course Objective:

- Tomotivatestudentstooptforinnovationandentrepreneurshipasa career option.
- Tofosterentrepreneurial traitsandcompetencies
- To make students understand the critical role of creativity, design thinking and innovation inentrepreneurship
- Topreparestudentstoplan,launchandmanagestart-ups/enterprise
- Toestablishanecosystemforstudentsthatisconducivetonetworkingandincubating

Course Outcomes:

Aftercompletingthe course, studentswillbeableto:

- Consideroptinginnovationandentrepreneurshipasacareer.
- Developentrepreneurialtraitsandcompetencies.
- Ideate aviablebusinessproposition.
- Networkforventuringandinnovating.
- Pitchabusinessproposal.

Credits: 3+1	**Course Type: Major**
Max. Marks:100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(45)+Practical(30)

Units	**Topic**
I	**UNITI:Innovation** **5Hours** • Thisunitfocusesondevelopingthefundamentalconceptofinnovationanditsdimensions. • Innovation:Concept,significance,typesandprocess • Innovationdiffusiontheory • Innovation in organizations: Drivers and barriers, bottom-up and top-down approach,horizontalversus verticalapproach • Dimensions of innovation: Innovation eco-system in India, social Innovation, grassrootsinnovation, frugal innovation, and global Innovation-global innovation index framework(GII)
II	**UNIT II: Creativity & Design thinking** • The focus of this unit will be on developing the basic concepts and role of creativity &designthinkingin innovation. • Creativity- Concept, significance, role, processes and fostering

	creativity forinnovation • Designthinking:Concept,discipline,role,mindset**,**resources, andprocesses • Design Thinking Approaches: Empathy, Ethnography, Divergent thinking, convergentthinking, Visual thinking, Assumption testing, Prototyping and Time for learning andvalidation
III	UNITIII**:**EntrepreneurshipandEnterpriseManagement 6hours Thisunitwillorientthestudentstotheconceptofentrepreneurshipand enterprisemanagement. • Entrepreneurship-Concept,stages,growthprocess,andentrepreneurshipdevelopmentinIndia,Government policies and schemes • Entrepreneur-characteristics,competencies,types,styles,andmotivation • Enterprise&itsmanagement-typesandstrategiesforStart-uplaunching,managementandsustenance • Exitstrategies foranewstart up-trendsin India • Networking&businessethics
Practical:	Entrepreneurial Motivation: Developing an appreciation for entrepreneurial traits andentrepreneurshipasacareerthrough 14Hours • Entrepreneurial motivation orientation – Sector-specific case studies of successfulentrepreneursand profilingof requiredtraits forinnovation Understanding self as a prospective entrepreneur - Who am I?, Locus of control, CompetencyProfiling,SWOC analysis, Mappingentrepreneurial styles UnderstandingandappreciatingInnovationsanddesign thinking: 20Hours • Identificationofinnovationsinday-to-daylife • Criticalevaluationofinnovationsanddesign-drivensolutions–casestudies • Environmentscanningforbusinessopportunities • User'sempathymapping–understandinguser'spain,paincreatorsandrelievers • Redesign activitiesforpossiblesolutions-productsandservices • Industry-integratedlearning–liveprojects Marketresearch& mappingstart-upstation: 12Hours • Environmentscanningforbusinessopportunities • Ideation:Generation,articulation,testingandincubating • Developafeasibilityreport Businessplanandappraisal: 10Hours • Businesspreparation • Appraisalofbusinessplan • Riskauditingandmitigation OperationsandMarketingmanagement: 12 Hours • Developoperationalmanagementsheet andapplicationsforregistrationsandlicenses • Familiarizingwiththerelevantdocuments,includingtheinventoryandstockregisters. • Customersegmentationandprofiling

	• Preparethe4Ps ofthemarketingmix,includingdigitalmarketingtools • Prepareanelevatorpitch Financialmanagement: 12Hours o Analysisoffinancialrequirementsandavailablecapital o Sourcesoffinance-bootstrapping, crowdfunding, angelinvestingventurecapital o Financialstatements,cashflowmanagement, applicableinterestratesofdifferenttypesofloans o Calculationoffinancialratios,break-evenanalysisandapplicabletaxes o Designingfundingstrategyand start-upvaluation Humanresourcemanagementandlegalframework: 10H • Functionalrequirements andcostimplications • Teamformation • Ensuringhealthandsafetyatthe workplace • Businesscommunication • Enterpriseregistration-Legalcompliances,paperworkandcost • Intellectualpropertyrights

Suggested Readings:

- Bhatt Arvind Kumar (2022). Innovation and Entrepreneurship. Atlantic publisher
- Chabbra T. N. (2019). Entrepreneurship Development. New Delhi: Sun India.
- Charantimath, P. M. (2018). Entrepreneurship Development and Small Business Enterprises. Pearson Publications.
- Carayanis Elias G, Samara Elpida T & Bakouros Yannis L.(2015). Innovation and Entrepreneurship. Springer.
- Drucker. Peter F. (2006), Innovation and Entrepreneurship. Harper Business
- Gundry L, K. & Kickul J. R. (2007). Entrepreneurship Strategy: Changing Patterns in New Venture Creation, Reinvention. SAGE Publications, Inc.
- Santiago, Sam (2011), The official book of Innovation. Rising above LLC publisher
- Soni, Pwan.(2020). Design your thinking: The Mindsets, toolsets and skillsets for creative problem solving
- Christensen M Clayton (2013). The innovator's dilemma. Harvard Business Review Press.
- Daum Callie (2020). Business strategy: essentials you always want. Vibrant publishers
- GoyalP.(2017).Beforeyoustartup:Howtopreparetomakeyourstart-upadreamreality.Fingerprintpublishing.
- HBR's10MustReadsonStartupsandEntrepreneurship(2018).FeaturingBonusArticle"WhytheLean Startup Changes Everything"bySteveBlank
- Nath,D.Mitra,S.(2020) Funding yourstartupand othernightmare.Penguinportfolio.
- Taneja&Gupta.(2001).EntrepreneurDevelopment-NewVentureCreation.NewDelhi:GalgotiaPublishingCompany.

B.Sc. Home Science
VII Semester
History and Theories of Human Development

Programme- B.Sc. Home Science	Year: First	Semester:1st

Course Description:

History and Theories of Human Development explores the evolution of ideas surrounding human growth and behavior across different cultures and time periods. The course examines key

developmental theories from philosophers and psychologists like Locke, Freud, Erikson, and Vygotsky, alongside Indian perspectives. Students will analyze how these theories contribute to our understanding of childhood, personality, and social development. By the end, they will gain a comprehensive view of human development in an interdisciplinary context.

Course Code:	**Course Title: History and Theories of Human Development**

Course Objective:

1. To learn about the history of the study of human development
2. To comprehend the cultural notions of children and childhood
3. To focus on Indian history and tradition in the exploration of human behaviour and development
4. To provide a framework to locate human development and childhood in an interdisciplinary context

Course Outcome

1. Students will have a comprehensive understanding of the history of the study of human development, including key theories and milestones in the field.
2. Students will be able to comprehend and critically analyze cultural notions of children and childhood, including how these notions vary across different societies and time periods.
3. Students will gain knowledge about Indian history and tradition in relation to the exploration of human behavior and development, allowing them to understand the unique cultural context of India.
4. Students will develop the ability to locate human development and childhood within an interdisciplinary context, integrating perspectives from fields such as psychology, sociology, anthropology, and education.

Credits: 2+2	**Course Type: DSE**
Max. Marks:100+50 Min.	**Passing Marks:40+20**

Total No. of Lectures: Theory(60) +Practical(60)

Units	**Topic**	**No. of Lectures**
I	**UNIT I: THEORETICAL ASPECTS** ● Early Theories and Eastern Philosophers: Locke, Rousseau, Swami Vivekanand, Siddhartha Gautam. ● Ecological system theory- UrieBronfrenbrener ● Ethological theory-Bowlby	5
II	**UNIT II: PSYCHOANALYTICAL THEORY** ● Psychosexual Theory- Sigmund Freud ● Neo-Freudian	5
III	**UNIT III: THEORIES OF PERSONALITY** ● Personality Theory- Erik Erickson ● Self-Actualization Theory- Abraham Maslow ● Trait Theory: Alport	5

IV	**UNIT IV: SOCIO-CULTURAL NEED THEORY** ● Need Theory- Henry Murray ● Sociocultural theory- Vygotsky ● Moral Development Theory- Kohlberg	5
V	**UNIT V: COGNITIVE & LEARNING THEORIES** ● Cognitive development theory-Jean Piaget and Howard Gardner multiple Intelligence theory. ● Social Learning and Behaviour theory– Albert Bandura, B.F. Skinner, Ivan Pavlov and Watson's classical conditioning, Thorndike's S-R Theory.	10
Practical:	1. **Case Study Analysis**: Apply developmental theories (e.g., Freud, Erikson, Piaget) to analyze child behavior in case studies. 2. **Cultural Perspectives Presentation**: Research and present how different cultures perceive childhood across history. 3. **Timeline Creation**: Build a visual timeline of key milestones and theories in human development. 4. **Role-Playing Developmental Stages**: Act out Freud's or Erikson's stages of development to understand behaviors at each stage. 5. **Child Observation**: Observe children in different settings and analyze their behavior using developmental theories. 6. **Parent/Educator Interviews**: Interview parents or educators about developmental milestones, linking their responses to theories. 7. **Conditioning Experiments**: Conduct simple experiments to demonstrate classical and operant conditioning principles. 8. **Philosophy Comparison**: Compare Eastern (e.g., Vivekananda) and Western (e.g., Locke, Rousseau) views on human development. 9. **Interdisciplinary Discussion**:	60

	Explore human development through psychology, sociology, and education in group discussions. 10. **Debate on Theories**: Organize a debate on modern vs. traditional theories of human development (e.g., Freud vs. Bronfenbrenner).	

Suggested Readings:

1. Crain, W. (1992). Theories of Development, Concepts and Applications. New Jersey: Prentice Hall
2. Thomas, R. M. (1979). *Comparing Theories of Child Development*. Belmont California.
3. Decaprio,N.S. (1963). *Personality Theories: A guide to Human Nature*. C.B.S College Publishing
4. Maier,H.W. (1978). *Three Theories on Child Development.* Harper and Row
5. Langer,J.(1969). *Theories of Child Development*. Holt Rinehart.
6. Dyrne, D. andRelley,K., (1981). *An Introduction to Personality*. Prentice Hall.
7. Looft,A. (1972). *Development Psychology*. A Book of Readings Dryden Press.
8. Gruber,H.E.andVonecha,J.J. (1976). *The Essential Piaget.* Vincent Torre.
9. Newman, B.M. & Newman, P. R. (2007). *Theories of Human Development*. Mahwah, NJ: Lawrance Erlbaum.

B.Sc. Home Science
VII Semester
Human Psychology and Methods of Studying Human Development

Programme- B.Sc. Home Science	**Year: First**	**Semester:1st**

Course Description:

Human Psychology and Methods of Studying Human Development explores the psychological foundations of human behavior and the various methods used to study developmental processes. The course covers key psychological concepts, developmental milestones, and research methodologies like observations, experiments, and longitudinal studies. Students will learn to apply these methods to analyze growth patterns, cognitive changes, and social behavior across the lifespan. By the end, they will have a comprehensive understanding of human psychology and developmental research techniques.

Course Code:	**Course Title:Human Psychology and Methods of Studying Human Development**

Course Objective:

1. Students will gain a comprehensive understanding of the key concepts and theories in human psychology, including cognitive, social, and emotional development.
2. Students will learn about the various methods used to study human development, such as observation, experimentation, and surveys, and will understand their strengths and limitations.
3. Students will develop critical thinking skills and the ability to evaluate and interpret research findings in the field of human development.
4. Students will be able to apply psychological theories and research to real-world scenarios, enhancing their understanding of human behaviour and development.

Course Outcomes:

1. To introduce students to the fundamental concepts and theories in the field of human psychology.
2. To familiarize students with the different methods and approaches used to study human development, including observation, experimentation, and surveys.
3. To enable students to critically evaluate and analyze research findings and theories in the field of human development.
4. To equip students with the knowledge and skills necessary to apply psychological principles and research to real-world situations and contexts.

Credits: 2+2	**Course Type: DSE**
Max. Marks: 100+50	**Min. Passing Marks:40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**UNIT- I: METHODS OF STUDYING HUMAN BEHAVIOUR** a) Introspection b) Case Study c) Observation d) Interview e) Experimental f) Sociometry g) Questionnaire	10
	UNIT-II: UNDERSTANDING THE SELF	

II	● Administration, Scoring and Evaluation of any test about the self, e.g. Myers Briggs Type Indicator, the subjective well-being inventory (WHO)	10
III	**UNIT-III SOME PSYCHOMETRIC METHOD** ● Scales of Infant Assessment ● The Wechsler Battery of Tests ● Children's Appreciation Test ● Thematic Appreciation Test ● Draw a Man Test ● House-Tree-Person ● Raven's Progressive Matrices ● Self-Esteem Inventory ● Sex role inventory	10
IV	**UNIT-IV BEHAVIOURAL PROBLEMS** a) Individual Differences b) Frustration c) Conflicts	5
Practical:	**PRACTICAL** 1. Prepare and conduct an interview schedule to gather data on problems related to childhood/adolescence/adulthood/old age. 2. To collect and analyse the data of 30 sample using psychometric test on childhood/adolescence/adulthood/old age 3. Preparation and application of word association test, sentence completion test for preschoolers.	30

Suggested Readings:

1. Aylward, G. (1994). Practitioner's Guide to Developmental and Psychological Testing. New York: Plenum Press
2. Blaxter, L. Hughes, C. and Tight, M. (1999). How to Research. New Delhi: Viva Books.
3. Hayes, N. ed. (1997). Doing Qualitative Analysis in Psychology. Hove: Psychology Press
4. Smith, J.A., Harre, R. and Van Langenhove, L. (1995). Rethinking Psychology. London: Sage
5. Yin, R. (1994). Case Study Research: Design and Methods (2nd ed.) Beverly Hills, CA: Sage Publishing

B.Sc. Home Science
VII Semester
Guidance & Counselling

Programme- B.Sc. Home Science	**Year: First**	**Semester:1st**

Course Description:

Guidance & Counselling focuses on the principles and techniques used to support individuals in making informed decisions about their personal, educational, and career paths. The course covers theories of counseling, communication skills, and strategies for addressing psychological, emotional, and behavioral issues. Students will learn how to provide effective guidance, conduct counseling sessions, and develop intervention plans tailored to diverse needs. By the end, they will be equipped with the skills to facilitate growth and well-being in various settings.

Course Code:	**Course Title: Guidance & Counselling**

Course Objective: At the end of this course the participants will be able to:
1) Recognize differences among students
2) Identify educational problems of students at different stages
3) Administer and interpret different types of tests
4) Help students with learning difficulties and social/emotional problems.

Course Outcomes:

1. Participants will be able to recognize and appreciate the individual differences among students, including variations in cognitive abilities, learning styles, and socio-emotional development.
2. Participants will be able to identify and understand the educational problems that students may face at different stages of development, such as academic challenges, behavioral issues, and social difficulties.
3. Participants will gain the knowledge and skills necessary to administer and interpret various types of tests and assessments, enabling them to assess students' cognitive abilities, academic progress, and socio-emotional well-being.
4. Participants will develop strategies and interventions to support students with learning difficulties and social/emotional problems, including implementing appropriate accommodations, providing individualized support, and fostering a positive and inclusive learning environment.

Credits: 2+2	**Course Type: Major**
Passing Marks:40+20	Passing Marks:40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**UNIT 1 SCOPE OF GUIDANCE AND COUNSELLING** - Definition of Guidance and Counselling, Phases of the Counselling Process - Principles of Guidance - Need and Importance of Guidance - Need and Characteristics of an	5

	Effective Counsellor.	
II	**UNIT 2 GROUP AND INDIVIDUAL GUIDANCE** - Group Guidance- Advantages, Planning Group Counselling Sessions - Individual Guidance- Advantages, The Counselling Set-up	5
III	**UNIT 3 EDUCATIONAL GUIDANCE AND COUNSELLING** 1.1 The Purpose of Educational Guidance 1.2 Factors Contributing to Educational Problems Self¬ Home¬ School¬ Neighbourhood¬ Community¬ 1.3 The Educational Guidance Programme ➢ Guidance at Primary School Level ➢ Guidance at Secondary School Level ➢ Guidance at College Level 1.4 Roles of the Counsellor	10
IV	**UNIT 4 VOCATIONAL GUIDANCE AND COUNSELLING** 3.1 The Nature of Vocational Guidance. 3.2 The Need for Vocational Guidance the Socio-economic and Cultural Context¬ 3.3 The Concept of Vocational Development and Factors Contributing to Vocational Development 3.5 The Process of Vocational Counselling 3.6 Job Analysis and Job Satisfaction 3.7 Occupational Information ➢ Sources of Occupational Information ➢ Collection of Occupational Information ➢ Classification and Dissemination	5
V	**UNIT 5 MEASUREMENT IN GUIDANCE** 5.1 Need for Psychological Tests and Uses of Tests 5.2 Characteristics of a Good Psychological Test 5.3 Different Types of Test Intelligence Tests and their Interpretation, Achievement and Aptitude Tests, Personality Inventories, Interest Inventories, Projective Techniques 5.4 Testing Procedure, Scoring, Recording, Reporting Test Interpretations in Counselling 5.5 Limitations of Psychological Tests	5

Practical:	**PRACTICALS:** 1. Educational counselling and case study at secondary school level and college level. 2. Plan a career counselling for Higher Secondary and Senior Secondary school children.	60

Suggested Readings:

1. Kiruba Charles and Jyothsna. (2013). Guidance and counselling, Neelkamal Publications.Pvt., Ltd., New delhi.

2. Mukhopadhya, 'Guidance and Counselling' Himalya Publishing House Ltd., New Delhi 1989.

3. SitaramJayaswal, 'Guidance and Counselling'-An electric approach, Parkashendra, Lucknow 1990.

4.Burnard, P. (1999). Counselling Skills Training. New Delhi: Viva Books

5. Manthei, R. (1997). Counselling: the Skills of finding solutions to problems. London: Routledge

B.Sc. Home Science
VII Semester
FAMILY DYNAMICS AND PARENTHOOD

Programme- B.Sc. Home Science	**Year: First**	**Semester:VII**

Course Description:

Family Dynamics and Parenthood explores the interactions, roles, and relationships within families and the impact of parenting on child development. The course covers topics such as family structures, communication patterns, parenting styles, and the influence of cultural and societal factors on family life. Students will examine the complexities of family systems and the responsibilities of parenthood, including nurturing, discipline, and education. By the end, they will understand the dynamics that shape family functioning and child outcomes.

Course Code:	**Course Title : Family Dynamics And Parenthood**

Course Objective:

1. To understand the dynamics of different types of families and the factors that influence family functioning.
2. To explore the role of parenthood and its impact on individuals, relationships, and family dynamics.
3. To examine the challenges and issues that families and parents may face, including communication problems, conflict resolution, and parenting styles.
4. To develop strategies and skills to promote healthy family dynamics, effective parenting practices, and positive parent-child relationships.

Course Outcomes:

1. Students will gain a comprehensive understanding of the dynamics of different types of families, including nuclear families, extended families, single-parent families, and blended families.
2. Students will be able to identify and analyze the factors that influence family functioning, such as cultural norms, socioeconomic status, and individual differences.
3. Students will develop an understanding of the impact of parenthood on individuals, relationships, and family dynamics, including changes in roles, responsibilities, and identity.
4. Students will acquire knowledge and skills to address common challenges and issues that families and parents may face, including effective communication strategies, conflict resolution techniques, and evidence-based parenting practices.

Credits: 2+2	**Course Type**
Passing Marks:100+50	Passing Marks:40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**UNIT- I** ● Definition of family ● Different stages in family life cycle ● Family functions ● Role of grand parents ● Contributions of the family to the	10

	development of children ● Parental attitudes ● Family size and factors influencing family relationship in different sized family	
II	**UNIT - II** ● Family planning ● Types and patterns of families ● Forms of family- patriarchal and matriarchal ● Divorce in India ● Marriage and family problems in India	5
III	**UNIT - III** ● Parent child relationship during different stages of life ● Significance of parenting ● Types of parent-child relationship ● Parenting styles- authoritative, authoritarian, permissive, neglectful.	5
IV	**UNIT - IV** ● Hindu marriage act, special marriage act ● Dowry prohibition act ● Domestic violence act ● PNDT (prenatal diagnostic act- 1994)	10
Practical:	1. Assessment of type of families in the society 2. Assess the parenting styles exercised in families 3. Assessment of marital adjustment among families 4. Planning a parent education programme 5. Visit to family court	60

Suggested Readings:

1. Fine, Rarving (Ed.) 1980 Hand book on Parent Education.
2. Gupta, G.R.Family and Social Change in India, Vikas Publishing House, New Delhi, 1976.
3. Kulkarni, S. (1986). Introduction to Educational Technology, Oxford and I.B.H. Publishing Co.
4. Kulkarni, S. (1988). Parent Education Perspectives and Approaches
5. Kumud Desai, Indian Law of Marriage and Divorce, N.M.TirupatiPvt.Ltd., 1981.
6. Raju, M.L. and Krishna, G.R. (Ed.) Future of India Family Challenges for Social Work Education, 1996.
7. Smart, M.S., and Smart, L.S. Families Developing Relatioships, Mac Millian Publishing Co.Inc., New York, 1976.
8. Student, N.and Watters, T. 1977.Relationship in Marriage and Family, Macmillian Publishing Co.Inc.,

B.Sc. Home Science
Semester- VII
Advanced Human Physiology

Programme- B.Sc. Home Science	**Year: First**	**Semester:VII**

Course Description: This course provides a comprehensive understanding of human physiology and the principles of promotive health. It covers the structure and function of the human body, major physiological systems, and the integration of these systems in maintaining health. The course also emphasizes strategies for health promotion and disease prevention, equipping students with knowledge and skills to enhance public health.

Course Code:	**Course Title:** Advanced Human Physiology

Course Objective:

- Understand the basic concepts of human physiology and the functioning of major organ systems.
- Explain the mechanisms that regulate body functions and maintain homeostasis.
- Identify the principles and practices of health promotion and disease prevention.
- Apply physiological knowledge to promote health and well-being.
- Develop strategies for community health promotion and education.

Course Outcomes:

- Demonstrate a thorough understanding of human physiology.
- Be able to assess and analyze physiological data.
- Understand and apply health promotion strategies in various settings.
- Exhibit knowledge of preventive health measures and their importance.
- Prepare for advanced studies or careers in health sciences and public health.

Credits: 2+2	**Course Type- DSE**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	Unit 1: Introduction to Human Physiology **Unit Description:** This unit covers the fundamental concepts of human physiology, including an overview of the human body, its organization, and homeostasis. **Subtopics:** **1. Overview of Human Physiology** • Definition and scope of physiology • Levels of organization in the human body • Homeostasis and feedback mechanisms **2. Cell Physiology** • Structure and function of cells • Cell membrane transport mechanisms • Cell communication and signal transduction	6
II	Unit 2: Major Physiological Systems I Description: **This unit focuses on the cardiovascular, respiratory, and digestive systems, detailing their structure, function, and regulatory mechanisms.** **Subtopics:** 1. Cardiovascular System • Anatomy of the heart and blood vessels	6

	• Blood flow and cardiac cycle • Regulation of blood pressure and cardiac output 2. Respiratory System • Structure of the respiratory tract • Mechanisms of breathing • Gas exchange and transport 3. Digestive System • Anatomy of the digestive tract • Digestive processes and enzyme action • Nutrient absorption and metabolism	
III	Unit 3: Major Physiological Systems II **Description:** This unit covers the nervous, endocrine, and immune systems, highlighting their roles in maintaining health and responding to challenges. **Subtopics:** **1. Nervous System** • Structure and function of neurons • Central and peripheral nervous systems • Neural pathways and reflex arcs **2. Endocrine System** • Major endocrine glands and their hormones • Mechanisms of hormone action • Regulation of metabolic processes **3. Immune System** • Components of the immune system • Innate and adaptive immunity • Immune responses to pathogens	6
IV	Unit 4: Principles of Promotive Health **Description:** This unit introduces the principles of health promotion, including strategies for improving health and preventing disease at the individual and community levels. **Subtopics:** 1. Health Promotion Concepts • Definition and importance of health promotion • Determinants of health and disease • Models and theories of health behavior 2. Disease Prevention • Levels of prevention (primary, secondary, tertiary) • Screening and vaccination programs • Health education and counseling 3. Community Health Strategies • Community-based health promotion initiatives • Role of public health agencies • Health policy and advocacy	6
V	Unit 5: Applied Physiology and Promotive Health **Description:** This unit integrates knowledge of physiology and health promotion, focusing on practical applications in various settings. **Subtopics:** 1. Physical Activity and Health • Physiological benefits of exercise	6

	• Designing exercise programs for health promotion • Role of physical activity in disease prevention 2. Nutrition and Health • Principles of a balanced diet • Nutritional guidelines and recommendations • Impact of nutrition on health and disease prevention 3. Stress and Health • Physiological response to stress • Stress management techniques • Role of mental health in overall well-being	
Practical:	1. **Introduction to Human Physiology**- Prepare and observe cell slides, identify organelles, and discuss their functions. 2. **Homeostasis Simulation**-Conduct experiments on temperature regulation and feedback mechanisms. 3. **Cardiovascular System Analysis**- Measure heart rate, blood pressure, and analyze ECG readings. 4. **Respiratory System Function Test**- Perform spirometry, measure lung volumes and capacities. 5. **Nervous System Reflex Testing**- Conduct reflex tests (e.g., patellar reflex), analyze reaction times. 6. **Endocrine System Hormone Analysis**- Analyze case studies on hormonal imbalances, conduct experiments on hormone action. 7. **Health Promotion Campaign Design**- Plan and design a campaign on a chosen health topic, create educational materials. 8. **Disease Prevention Workshop**- Organize a workshop on screening and vaccination, role-play counseling sessions. 9. **Exercise Physiology Lab**- Measure changes in heart rate, blood pressure, and respiratory rate during exercise. 10. **Nutrition Assessment**- Conduct dietary assessments, analyze nutrient intake, provide nutritional counseling.	60

Suggested Readings:

1. Guyton, AC.and Hall, JE (2011) Textbook of Medical Physiology, XII Edition, HarcourtAsiaPvt. Ltd/ W.B. Saunders Company. LongmanGroup Ltd.
2. RossandWilson(1973).FoundationofAnatomyandPhysiology,MedicalDivision
3. ParkJE&ParkK(2009).Park'sTextbookofPreventiveandSocialMedicine,20th ed
4. Bedi YP (1980). A Handbook of Social and Preventive Medicine, Atma Ram and Sonsedition.M/s Banarsi Das Bhanot, Jabalpur
5. Human Physiology: An Integrated Approach" by Dee Unglaub Silverthorn
6. Guyton and Hall Textbook of Medical Physiology" by John E. Hall
7. Health Promotion: Planning & Strategies" by Jackie Green and Keith Tones
8. GanongWF(2003). ReviewofMedicalPhysiology, 21sted.McGraw Hill.

B.Sc. Home Science
Institutional Food Management
Semester-VII

Programme- B.Sc. Home Science	**Year: 4th**	**Semester:VII**

Course Description:

This course aims to provide a comprehensive understanding of key areas in Institutional Food Management, offering practical field-level experience in Food Administration. Participants will gain the necessary expertise to excel as food service managers and be equipped to establish and manage their own food service units, fostering entrepreneurship in the food industry.

Course Code:	**Course Title : Institutional food management**

Course Objective:

- To develop a knowledge base in key areas of Institutional Food Management.
- To Provide Practical field level experience in institutional Food Administration.
- To impart necessary expertise to function as a food service manager.
- To equip individual to start their own food service unit leading to entrepreneurship.

Course Outcomes:

1. Develop a comprehensive knowledge base in key areas of Institutional Food Management.
2. Gain practical field-level experience in institutional Food Administration.
3. Acquire the necessary expertise to function effectively as a food service manager.
4. Equip individuals with the skills and knowledge required to start and manage their own food service unit, fostering entrepreneurship in the food industry.

Credits: 2+2	**Course Type- DSE**
Max. Marks:100+50	**Min. Passing Marks: 40+20**

Total No. of Lectures: Theory(30)+Practical(60)

Units	**Topic**	**No. of Lectures**
I	**HISTORICAL PERSPECTIVE OF FOOD SERVICE** • Evolution of the food service industry • Kinds of food service systems Conventional, commissary, ready prepared, assembly/serve	7
II	**MANAGEMENT & ORGANIZATION** **Management Theories** Classical, Scientific, Behavioral, Systems approach, Contingency approach, MBO, JIT, TQM **Managerial operations** a) Functions of management /manager Principles of management Definition of Organization and steps in organizing **Tools of Management**	7

	a) Tangible Tools: Organization chart, Job description, specification, Job analysis: Path way chart, Process c Work schedule**,** Production schedule, Staff and servic analysis, Budget Intangible tools: Communication, Leadership, Decision making	
III	**MATERIAL MANAGEMENT** a) Menu planning: Functions, Factors affecting menu planning, Menu construction, Types of menu, Menu card, Qualifications of menu planners b) Purchase: – Market, Buyer, Vendor, Methods of Purchase: Formal and Informal, Purchasing procedure c) Storage: Types of storage, Store room requirement, Appropriate temperature for storage of different Storeroom Records d) Food production: Production planning and control: Importance of planning, Production forecast, estimating quantities to buy Quantity preparation techniques Production Schedule Product evaluation, Standardization of recipes, Recipe adjustments and portion control. e) Food delivery and service: Centralized and decentralized, factors affecting selection, Styles of service, delivery and service equipment.	8
IV	**MANPOWER MANAGEMENT** • **Manpower Planning**: Functions of a personnel manager, Need of Unit Menu, type of operations, Type of service, Job description and jobs pacification • **Manpower placement:** Recruitment: Process and Sources-Internal and External a. Selection: Process interview, Tests b. Orientation: Importance, Content of programme, Developing an Orientation programme c. Training: Importance; Types - OJT, Group; continuous training, training for development Developing a training programme	8
Practical:	1. Market survey and analysis of processed and finished products. **2.** Planning Menus for quantity (Any of three) ▪ Banquet • Outdoor catering • Canteens • Packed meals • Food service units in Hostel 3. Standardizing recipes for quantity for 100. 250, 500. 4. Any two of the following • Snacks • Cereal preparations • Cakes • Curry preparations	60

	5. Canteen Project	

Suggested Readings:

1. West B Bessie & Wood Levelle (1988) Food Service in Institutions 6th Edition Revised By Hargar FV, Sh SG, &Palgne Palacio June, Macmillian Publishing Company New York.
2. SethiMohini (2005) Institution Food Management New Age International Publishers
3. Tripati P C & Reddy PW (2008) Principles of Management 3rd edition Tata McGraw Hill Book Company.
4. Knight J B &Kotschevar LH (2000) Quantity Food Production Planning & Management 3rd edition John & Sons.
5. Dessler Gary (2007) Human Resource Management 11th edition Prentice Hall New Jersey.
6. Luthans Fred (2004) OrganisationalBehavior 10th Edition McGraw Hill International.

B.Sc. Home Science

Advances in Food Microbiology

Programme- B.Sc. Home Science	Year: 4th	Semester:VII

Course Description:

This course provides a comprehensive understanding of microorganisms in food spoilage, infections, and biotechnology. It covers techniques for preventing and controlling microorganisms in foods, emphasizing food preservation. The course also addresses microbiological safety criteria in food operations to prevent public health hazards. Students will gain both theoretical knowledge and practical skills to ensure food safety and quality.

Course Code:	Course Title : Advances in Food Microbiology

Course Objective:

1. To understand the nature of microorganisms involved in food spoilage, food infections and intoxications an those used in food biotechnology (food fermentation and various food processing industries)
2. To gain knowledge of principles of various techniques used in the prevention and control of the microorga in foods (food preservation)
3. To understand criteria for microbiological safety in various foods operations to avoid public health hazards food contamination.

Course Outcomes:

1. Understand the role of microorganisms in food spoilage, foodborne infections, intoxications, and their applications in food biotechnology, including food fermentation and processing industries.
2. Acquire knowledge of techniques for preventing and controlling microorganisms in food, including principles of food preservation.
3. Understand criteria for ensuring microbiological safety in food operations to mitigate public health hazards related to food contamination and meet food safety standards.

Credits: 2+2	Course Type- DSE
Max. Marks: 100+50	Min. Passing Marks: 60

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	OVERVIEW OF BASIC MICROBIOLOGY •Definition, Scope of Food Microbiology •An introduction to microbial world: Bacteria, Moulds, Fungi, Yeast, Viruses, protozoa •Bacterial groups based on their morphology: Gram +ve/Gram –ve bacteria, Motile/Non-motile bacteria, Sporulating/Non-sporulating bacteria,Bacterial groups based on their physiological growth factors: Temperature, pH, water activity, availability of oxygen. Fungi and Mould Yeast: General features & their importance in food Microbiology,Viruses and Bacteriophages: Definition, their general characteristics & multiplication.	8

II	FOOD SPOILAGE AND PRESERVATION Food Spoilage: Definition, sources of contamination and microorganis involved in spoilages of various foods: Milk, Bread, Canned food, Vegetabl and fruits, Fruit juices, Meat, Eggs and Fish Physical and chemical means used in destruction of microbes: Definition of sterilization and disinfection, role of heat, filtration and radiation in steriliza use of chemical agents-alcohol, halogens and detergents.	7
III	**MICROORGANISMS IN HUMAN WELFARE** Importance of microbes in food biotechnology: genetically engineered organisms, probiotics and single cell proteins. Traditionally Fermented foods and their health benefits with special referen Indian Foods	7
IV	**FOOD SAFETY AND QUALITY CONTROL** Public health hazards due to microbial contamination of foods: Important fo borne infections, foodpoisoning and intoxications due to bacteria, moulds, viruses (*Salmonella typhi, Helicobacter pylori, Campylobacter jejuni, Yersi enterocolitica, Bacillus cereus, Staphylococcus aureus, Clostridium botulin Escherichia coli, Mycotoxins, Hepatitis A virus & Rota virus*)- Symptoms, r of transmission and methods of prevention. Assessing the microbiological quality of food: indicator organisms, microbiological standards, principles of GMP & HACCP in food processing. Safety management at household and industrial level. BOD, COD & water quality, sewage treatment plant	8
Practical:	• **Preparation of common Laboratory media and special media** fo cultivation of bacteria, yeast and moulds. • **Staining of Bacteria**: Gram +ive and Gram -ive • **Cultivation and identification of important culture molds and y** (Slides and molds culture) • **Study of environment around us as sources of transmission of microorganisms in foods.** Assessment of surface sanitation of food preparation unit's swabs and rinse techniques.	60

Suggested Readings:

1. Banwart GJ.(1987) *Basic Food Microbiology* . CBS Publishers and Distributors.
2. Frazier WC, Westoff DC. (1998)*Food Microbiology. 4th ed*. Tata McGrawHill Publishing Co. Ltd.
3. Garbutt John (1997) *Essentials of Food Microbiology*. Arnold London.
4. Jay JM, Loessner DA, Martin J.(2005) *Modern Food Microbiology. 7th ed.* Springer
5. Pelczar MJ, Chan ECS, Krieg N. (1993) *Microbiology. 5th ed.* Tata McGraw-Hill Publishing Co. Ltd.
6. Prescott LM, Harley JP, Klein DA.(2008) *Microbiology. 6th ed*. WMC Brown Publishers.

ADVANCED NUTRITIONAL BIOCHEMISTRY

Programme- B.Sc. Home Science	Year: IV	Semester:VII

Course Description:Advanced Nutritional Biochemistry is a comprehensive course that builds upon undergraduate biochemistry knowledge to explore the regulation of metabolic pathways in the human body. Students will gain insights into the interrelationships between various metabolic pathways and learn to use instruments for biochemical analysis. This course prepares students for specialization in nutrition by providing a solid foundation in advanced nutritional biochemistry concepts and applications.

Course Code:	Course Title:ADVANCED NUTRITIONAL BIOCHEMISTRY

Course Objective:

- To augment the biochemistry knowledge acquired at the undergraduate level.
- To understand the mechanisms adopted by the human body for regulation of metabolic pathways.
- To get an insight into interrelationships between various metabolic pathways.
- To understand the principles and use of Instruments used for biochemical analysis.
- To become proficient for specialization in nutrition.

Course Outcomes:

1. Enhance and build upon the foundational biochemistry knowledge acquired at the undergraduate level.
2. Gain a comprehensive understanding of the intricate mechanisms employed by the human body to regulate metabolic pathways.
3. Develop insights into the interrelationships between various metabolic pathways and their impact on overall physiological functions.
4. Acquire proficiency in the principles and utilization of instruments commonly used for biochemical analysis in a research or clinical setting.
5. Prepare students for specialization in the field of nutrition by providing a solid foundation in advanced nutritional biochemistry concepts and applications.

Credits: 2+2	Course Type- DSE
Max. Marks: 100+50	Min. Passing Marks: 40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lecture
I	**CARBOHYDRATES, LIPIDS AND THEIR REGULATION** **Carbohydrates** • Structure and properties of mono saccharides, di saccharides and poly saccharides • Glycolysis (aerobic and anaerobic),Gluconeogenesis • Glycogenolysis and Glycogenesis,Citric acid cycle. **Proteins** • Structure, composition, classification and functions of prote**ins.** • Insulin, myoglobin and hemoglobin. • Metabolism of proteins and amino acids. • Urea cycle, Creatinine and Creatine Synthesis.	10

	Lipids • Structure, composition, classification and properties of lipids. • Fatty acids – synthesis of saturated and unsaturated • Triacylglycerol – synthesis • Phospholipids – synthesis • Lipoproteins – synthesis • Cholesterol – synthesis and regulation	
II	**Harmones-**Endocrinology • Classification of hormones. • Signal transduction. • Intracellular messengers • Secondary messengers • Prostaglandins	10
III	**NUCLEOTIDES AND NUCLEIC ACID** **Nucleosides and Nucleotides** • Nucleosides • Nucleotides: Purine Synthesis, Pyrimidine Synthesis. **Nucleic Acids** • RNA & DNA • Central dogma—replication, translation and transcription • DNA repair systems • DNA recombinant • Genetic mutations • Regulations of gene expression • Protein biosynthesis	10
IV	**INSTRUMENTATION IN NUTRITIONAL BIOCHEMISTRY** Basic principles of spectrophotometry. • Beer Lambert`s law. • Colorimetry.& Spectrophotometry • Atomic absorption. • Flame photometry.	5
Practical:	1. Calcium: Estimation of calcium in food and serum 2. Phosphorus: Estimation of inorganic phosphorus in food and serum 3. Ascorbic Acid: Estimation of ascorbic acid in foods 4. Proteins: a) Estimation of protein in food stuffs b)Estimation of albumin, globulin and albumin/globulin ratio in serum. c)Estimation of haemoglobin d)Glucose: Estimation of glucose in blood e)Cholesterol: Estimation of Cholesterol in blood	60

Suggested Readings:

- BergJM, Tymoczko JL and Stryer L. (2002) Biochemistry 5th ed. W.H. Freeman.
- Devlin TM. (2002) Text Book of biochemistry with Clinical Correlations 5th ed. John Wiley and Sons.
- Horton RH, Moran LA, Ochs RS, Rawn JD and Scrimgeour.(2002) Principles of Biochemistry 3rd ed. Prentice Hall.
- Murray RK, Granner DK, Kayes PA and Rodwell V.W. (2003) Harper's Illustrated Biochemistry. 26th ed. Mc Hill. Asia.
- Voet D and Voet JG. (2004)Biochemistry. 3rd ed. John Wiley and Sons.
- King, E.J. and Wootton, I.D.P. (1956) 3rdEd. Micro-Analysis inMedical Biochemistry. J and A Churchill Ltd.

Advanced Study in Human Development-I

Programme- B.Sc. Home Science	Year: IV	Semester:VIII

Course Description:

Advanced Study in Human Development-I offers an in-depth exploration of the complex processes involved in human growth and behavior across the lifespan. The course delves into advanced developmental theories, research methodologies, and the influence of biological, psychological, and environmental factors on human development. Students will critically analyze contemporary issues in areas such as cognitive, social, and emotional development. By the end, they will gain a comprehensive understanding of the advanced concepts that shape human development research and practice.

Course Code:	Course Title : Advanced Study in Human Development-I

Course Objective:

1. To provide in-depth knowledge and understanding of advanced theories and research in human development.
2. To explore the factors that influence human development across the lifespan, including biological, cognitive, social, and cultural factors.
3. To examine the impact of environmental contexts, such as family, school, and community, on human development.
4. To develop critical thinking and research skills in the field of human development.

Course Outcomes:

1. To provide in-depth knowledge and understanding of advanced theories and research in human development.
2. To explore the factors that influence human development across the lifespan, including biological, cognitive, social, and cultural factors.
3. To examine the impact of environmental contexts, such as family, school, and community, on human development.
4. To develop critical thinking and research skills in the field of human development.

Credits: 2+2	Course Type: Major
Max. Marks: 100+50	Min. Passing Marks:40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	Lectures
I	**UNIT I: PRENATAL DEVELOPMENT** • Recapitulation of stages in prenatal development; Genetic and Environment factors; Maternal Conditions and Teratogens. • Significance of the Genome Project for understanding human development •Assessment of New Born- APGAR scale, Brazelton neonatal Behavioural Assessment Scale, Neonatal ICU network neurobehavioral scale (NNNS) • Importance of Indian Practices during Pregnancy	8

II	**UNIT II: INFANCY (BIRTH- 2 YEARS)** ● The New-born: Birth Process and the Neonate ● Physical Description; Sensory Capacities and Reflexes ● Becoming Coordinates- Feeding, Sleeping, Crying ● Cognitive accomplishment: Imitation, Object Permanence ● Early Language Development ● Social development during Infancy	7
III	**UNIT III: CHILDHOOD (2-11 YEARS)** ● Transition from Infancy to Childhood ● Physical and Motor Development ● Personality Development. ● Language and Cognitive development ● Socio-Emotional Development: Social Relationship: Peers, Siblings and Parents; Experience of Schooling: Academic Development ● Moral Development	8
IV	**UNIT VI: ADOLESCENCE (11- 18 YEARS)** ● Transition from Childhood to Sexual Maturity: Puberty and its Consequences; Emotional Changes ● Development of Formal Operations: Adolescent Thought; ● Psychological disturbances: Depression, Suicide, Substance abuse. ● Mental Health, Juvenile Delinquency: Causes and prevention. ● HIV/AIDS: Causes and prevention.	8
Practical:	1. Prepare a check list for Physical Development (from infancy to adolescence period) 2. Prepare an assignment of Physiological changes occurs during adolescence period. 3. Prepare a scrap file for prenatal development. 4. Assignment on Study the different characteristics of a pre-schooler according to domains of development.	60

Suggested Readings:

1. Rice, F.P. (1995). Human Development. New Jersey: Prentice Hall
2. Berk, L.E. (1995). Child Development. London: Allyn& Bacon
3. Cole, M. & Cole, S. (1993). The Development of Children. (2nd Ed.) New York: Scientific American Books Freeman & Co.
4. Hurlock, E.B., (1988). Child Development McGraw Hill, New York
5. Subash, C. Arya, (1972). Infant and child care for Indian Mothers. Vikas Publishers, Delhi.
6. 6..Santrock, J.W. &Yussen, S.R. (MSHD2010). Life Span Development. Iowa: Wm. C. Brown Publishe

B.Sc. Home Science, VIII Semester

Child and Human Rights

Programme- B.Sc. Home Science	Year: IV	Semester:VIII

Course Description: Child and Human Rights examines the fundamental rights of children and humans as outlined by international conventions, laws, and policies. The course explores key issues such as child protection, education, healthcare, and the role of advocacy in promoting equality and justice. Students will critically analyze the challenges faced by marginalized groups and the impact of global efforts to uphold human rights. By the end, they will have a deep understanding of the legal and ethical frameworks surrounding child and human rights.

Course Code:	Course Title : Child and Human Rights

Course Objectiv:

1. To provide a comprehensive understanding of the fundamental rights of children and humans as enshrined in national and international frameworks.
2. To critically analyze the issues related to child protection, education, healthcare, and the broader implications of human rights.
3. To examine the legal, social, and ethical dimensions of human rights, with a special focus on child rights.
4. To explore the role of governmental and non-governmental organizations in advocating and implementing child and human rights programs.
5. To foster the skills to critically engage with policies and interventions that promote human dignity, equality, and justice.

Course Outcomes:

1. Students will have a thorough understanding of international and national child and human rights frameworks.
2. Students will be able to identify and analyze the challenges and violations of child and human rights.
3. Students will gain the skills to evaluate the effectiveness of various child welfare and human rights programs and policies.
4. Students will be able to advocate for child rights and contribute to the development and implementation of rights-based policies.
5. Students will understand the role of interdisciplinary approaches in promoting child and human rights at local, national, and global levels.

Credits: 4+2	Course Type: Major
Max. Marks: 100+50	Min. Passing Marks:40+20

Units	Topic	No. of Lectures
I	**Unit I: Introduction to Human and Child Rights** • Concept of Human Rights: Definitions, Historical Evolution, and Importance • Universal Declaration of Human Rights (UDHR) and International Human Rights	10

	Law • Child Rights: Definition and Key Concepts • United Nations Convention on the Rights of the Child (UNCRC) and its significance • Role of the State and NGOs in protecting child rights	
II	**Unit II: Child Rights in Education and Health** • Right to Education: Global and National Perspectives (RTE Act, 2009 in India) • Access to Quality Education: Barriers, Challenges, and Solutions • Right to Health: Child Nutrition, Healthcare Access, and Well-being • Child Malnutrition, Immunization Programs, and Healthcare Initiatives (ICDS in India) • Special Provisions for Children with Disabilities	5
III	**Unit III: Child Protection and Welfare Programs** • Child Protection Laws: National and International Frameworks (Juvenile Justice Act, POCSO Act) • Child Labour and Trafficking: Causes, Consequences, and Solutions • Child Welfare Programs: Governmental Initiatives (ICDS, Mid-Day Meal Scheme) • Protection of Children from Sexual Offenses (POSCO Act) and the role of Childline Services • Role of Social Workers and Counselors in Child Protection	5
IV	**Unit IV: Gender, Discrimination, and Rights of Vulnerable Groups** • Gender Rights and Equality: Issues faced by girls, LGBTQ+ children • Child Marriage: Global Perspectives and Indian Context (Prohibition of Child Marriage Act) • Discrimination and Rights of Marginalized Children (Children of Minorities, Refugees, and Migrants) • Street Children and Orphans: Policies and Welfare Measures • Gender-Based Violence and Protection of Girl Child Rights (Beti Bachao Beti Padhao)	5
	Unit V: Global Human Rights Issues and Advocacy	

V	• Global Human Rights Challenges: War, Refugee Children, and Human Trafficking • Role of International Organizations (UNICEF, Save the Children, Human Rights Watch) in Child Rights Advocacy • Sustainable Development Goals (SDGs) and Child Rights • Child Rights in Conflict Zones: Child Soldiers, Refugee Camps • Advocacy and the Role of Media in Promoting Child and Human Rights	5
Practical:	1. **Case Study Analysis**: Analyze case studies of child rights violations and prepare detailed reports on solutions. 2. **Field Visit**: Visit a child welfare or healthcare center to observe the implementation of rights-based programs. 3. **Advocacy Campaign**: Design an awareness campaign focusing on child rights and present it to the class. 4. **Interviews**: Conduct interviews with social workers, NGO staff, or legal professionals working on child rights issues. 5. **Documentary Screening & Review**: Watch documentaries related to child rights and write critical reviews.	60

Suggested Readings:

1. Burner, T.(1986). Actual minds – possible words, London: Harvard University Press.
2. Butterworth, D. and Fulmer, A. (1993). Conflict, Control Power, Perth: Child and Family Consultant.
3. Digumarti, B.R. Digumarti, P.L.(1998) International Encyclopaedia of Women (vol.1) New Delhi: Discovery.
4. Dreze, Jean and Sen, Amartya (1989). Hunger and Public Action, U.K., Oxford University Press.
5. D"Souza, D. and Menon, J. Understanding Human Rights. (Series 1-4). Bombay: Research and Documentation Centre, St. Pius College.
6. Government of India (1992b). National Plan of Action: A commitment to the Child, Department of women and child Development, New Delhi.
7. Government of India (1994), Ministry of Finance, Economic Survey 1993-94, New Delhi.
8. Government of Tamil Nadu (1993). Dr. J. Jayalalita 15 point programme for child werfare, Department of Social Welfare and Nutrious Meal Programme, Madras.
9. Kudchedkar, S.(Ed)(1998). Violence against Women: Women against violence. Dlhi: Pencraft International.
10. National Institute of Nutrition(1993). Nutrition Trends in India, National Institute of Nutrition, Indian Council of Medical Research, Hyderabad.
11. National Insittue of Public Cooperation and Child Development (1993). A Statistics on children in India Packet Book 1993, New Delhi.
12. Child Rights in India: Law, Policy, and Practice by Asha Bajpai
13. The United Nations Convention on the Rights of the Child by UNICEF
14. Child Rights and Social Wrongs: An Overview by M.J. Moses
15. Human Rights: A Very Short Introduction by Andrew Clapham
16. Childhood and Human Rights in the Global South by Amrith Rajan
17. Children's Rights and Human Development by Murli Desai
18. Juvenile Justice: Care and Protection of Children Act, 2015
19. The State of the World's Children by UNICEF
20. The Child and the State in India by Myron Weiner

Child Study Techniques

Programme- B.Sc. Home Science	Year: IV	Semester:VIII

Course Description:

Child Study Techniques focuses on the various methods and tools used to observe, assess, and understand children's behavior, development, and learning. The course covers techniques such as observations, case studies, developmental assessments, interviews, and standardized tests to evaluate physical, cognitive, and emotional growth. Students will learn to apply these methods in real-world settings to gather insights into a child's development. By the end, they will be equipped to conduct comprehensive child studies and use findings to inform care, education, and intervention strategies.

Course Code:	Course Title : Child Study Techniques

Course Objective:

1. To familiarize students with various techniques for studying children's development and behavior.
2. To equip students with the skills to systematically observe, record, and assess children's physical, cognitive, emotional, and social development.
3. To explore ethical considerations and challenges in conducting child studies.
4. To provide hands-on experience in applying child study techniques in real-world settings.
5. To understand the implications of child study findings for caregiving, education, and intervention programs.

Course Outcomes:

1. Students will gain expertise in child observation, documentation, and assessment techniques.
2. Students will be able to analyze and interpret data from various child study methods to understand development.
3. Students will be capable of conducting child studies ethically and professionally in diverse environments.
4. Students will learn to use child study findings to inform practices in caregiving, education, and developmental interventions.
5. Students will be able to design and implement child study research projects.

Credits: 2+2	Course Type: DSE
Max. Marks: 100+50	Min. Passing Marks:40+20

Credits: 2+2

Units	Topic	No. of Lectures
I	**Unit I: Introduction to Child Study Techniques** • Concept and Importance of Child Study • Goals and Benefits of Studying Children's Behavior and Development • Types of Child Study Techniques: Observational, Experimental, Longitudinal, Cross-Sectional • Ethical Considerations in Studying Children • Role of Researcher and Observer in Child	7

	Studies	
II	**Unit II: Observation Techniques** • Systematic and Unsystematic Observation • Structured vs. Unstructured Observation • Anecdotal Records and Event Sampling • Time Sampling and Running Records • Using Observation for Assessing Social and Emotional Development	7
III	**Unit III: Child Assessment Techniques** • Developmental Screening and Assessment Tools • Techniques for Assessing Physical, Cognitive, Emotional, and Social Development • Standardized Tests: IQ Tests, Developmental Scales (Bayley Scales of Infant and Toddler Development) • Narrative Reports and Checklists • Using Portfolios and Work Samples	6
IV	**Unit IV: Experimental and Case Study Methods** • Experimental Studies: Controlled Conditions, Hypothesis Testing • Case Study Method: In-depth Exploration of Individual Children • Interviews and Questionnaires with Children and Caregivers • Longitudinal and Cross-Sectional Studies in Child Development • Challenges in Experimental Child Studies	5
V	**Unit V: Analyzing and Reporting Child Study Data** • Data Collection Methods: Recording, Coding, and Categorizing Behavior • Analyzing Observational and Experimental Data • Reporting and Presenting Child Study Findings • Implications of Child Study Findings for Caregiving and Education • Applications of Child Study Techniques in Designing Interventions	5
Practical:	**Assessment of Intelligence of children using Intelligence tests** - Raven's Progressive Matrices - Alexander's Pass-A-long Test - Seguin Form Board Test - Malin's Intelligence Scale for Indian Children **Assessment of Personality** - Picture drawing Tests - Children's Apperception Test - Rorschach Inkblot Test **Naturalistic Observation**: Conduct observations in various child settings (home, school, or play area) and	60

	record behaviors. **Developmental Assessment**: Use standardized developmental assessment tools to evaluate physical and cognitive development. **Anecdotal Records**: Maintain anecdotal records over time to observe changes in a child's social interactions. **Case Study**: Conduct an in-depth case study on a child, documenting developmental milestones, challenges, and environmental influences. **Interviews**: Design and administer interviews with children and their caregivers to gather information about development.	

Suggested Readings:

1. Anasthasi .A (1984) Psychological testing Macmillan Company, London.
2. Freeman F.S. (1963) Theory and practice of mental testing Printice Hall, New Delhi.
3. Guilford (1980) Psychometric Methods.
4. Mangal S.K. (1987) Psychological foundations of education Prakash brothers, New Delhi.
5. Mussen P.H. (1980) Hand Book of Research Methods in Child Development Wiley Eastern Pvt. Ltd.
6. How to Observe Children by Sheila Riddall-Leech
7. The Power of Observation by Judy R. Jablon and Amy Laura Dombro
8. Child Development: A Practitioner's Guide by Douglas Davies
9. The Observation Survey of Early Literacy Achievement by Marie Clay
10. Developmental Screening in Early Childhood by Samuel J. Meisels and Sally Atkins-Burnett
11. Bayley Scales of Infant and Toddler Development by Nancy Bayley
12. The Child Observation Record (COR) by HighScope
13. The Young Child: Development from Prebirth Through Age Eight by Donna S. Wittmer, Sandra H. Petersen, and Margaret B. Puckett
14. Research Methods in Child Development by Scott A. Miller
15. Observing Development of the Young Child by Janice J. Beaty

Child Welfare Programs

Programme- B.Sc. Home Science	Year: IV	Semester: VIII

Course Description:

Child Welfare Programs focuses on the policies, services, and interventions designed to promote the well-being and development of children, particularly those in vulnerable situations. The course covers areas such as child protection, foster care, adoption, education, and health services. Students will explore various government and non-governmental programs aimed at ensuring children's safety, nutrition, education, and emotional well-being. By the end, they will have a comprehensive understanding of the systems in place to support child welfare and advocacy efforts.

For further learning, you might explore **UNICEF's Global Study on Child Welfare** or **India's Integrated Child Development Services (ICDS)** for a deeper understanding of child welfare frameworks and their impact. Additionally, reading **research papers on child welfare policy** can provide more insights into contemporary challenges and strategies in child protection and development.

Course Code:	Course Title: Child Welfare Programs

Course Objective:

1. To understand the concept of child welfare and its importance in holistic child development.
2. To analyze various child welfare programs and policies at national and international levels.
3. To examine the role of government, NGOs, and international organizations in child welfare.
4. To explore the challenges and strategies for improving child welfare services.
5. To develop skills to advocate for and implement effective child welfare programs.

Course Outcomes:

1. Students will gain a comprehensive understanding of child welfare policies and programs.
2. Students will be able to critically analyze the effectiveness of various child welfare initiatives.
3. Students will develop an understanding of the roles of different agencies involved in child welfare.
4. Students will learn to identify gaps in existing programs and propose solutions to enhance child welfare services.
5. Students will be capable of designing and implementing advocacy campaigns for child welfare.

Credits: 2+2	Course Type: DSE
Max. Marks: 100+50	Min. Passing Marks:40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Unit I: Introduction to Child Welfare** • Concept and Definition of Child Welfare • Historical Overview of Child Welfare Programs • Importance of Child Welfare for Overall Development	6

	• Role of Family, Community, and Institutions in Child Welfare • Child Rights and Legal Frameworks for Child Welfare	
II	**Unit II: National Child Welfare Programs** • Overview of Child Welfare Programs in India • Integrated Child Development Services (ICDS) • Mid-Day Meal Scheme • Sarva Shiksha Abhiyan (SSA) • National Policy for Children and its Key Features • Protection of Children from Sexual Offenses (POCSO) Act	6
III	**Unit III: International Child Welfare Programs** • Overview of Global Child Welfare Programs (UNICEF, Save the Children) • United Nations Convention on the Rights of the Child (UNCRC) • Millennium Development Goals (MDGs) and Sustainable Development Goals (SDGs) for Child Welfare • Global Programs for Health, Nutrition, and Education (WHO, UNESCO) • International Best Practices in Child Welfare	6
IV	**Unit IV: Role of Government and NGOs in Child Welfare** • Government's Role in Child Welfare: Policies, Implementation, and Challenges • Role of Non-Governmental Organizations (NGOs) in Child Welfare • Collaboration Between Government and NGOs • Case Studies of Successful Child Welfare Interventions • Public-Private Partnerships in Child Welfare Programs	9
V	**Unit V: Challenges and Strategies for Child Welfare** • Common Challenges in Implementing Child Welfare Programs (Poverty, Education, Health) • Barriers to Accessing Child Welfare Services	9

	• Strategies for Improving Child Welfare Programs • Importance of Advocacy and Awareness in Promoting Child Welfare • Monitoring and Evaluation of Child Welfare Programs	
Practical:	1. Community Survey: Conduct a survey on child welfare awareness and services in local areas. 2. Program Analysis: Analyze a national or international child welfare program and present the findings. 3. NGO Interaction: Visit a child welfare NGO, interact with professionals, and report on their activities. 4. Case Study Development: Create a case study based on the success or failure of a child welfare program. 5. Advocacy Campaign: Design and implement an advocacy or awareness campaign for child welfare.	60

Suggested Readings:

1. Alfred.D.Souja (1973), 'Children in India', Critical Issues in Human Development, Indian Social Science Research Institute, Delhi.
2. Approaches to perspective plan on child development, NIPCCD, 1985.
3. D'Arcy, Davis-case (1989), Community Forestry: Participatory Assessment Monitoring and Evaluation, Rome: Food and Agriculture Organization.
4. Fecistein, M. (1986). Patterns in Evaluation, London: Macmillan.
5. Jayakaran, R.L. (1996). Participatory Learning and Action: User guide and manual, Madras: World Vision India.
6. Kumar, R. 'Child Development in India', Ashish Publishing House, New Delhi, Reprint 2003.
7. Paul Chowdary, D. Child Welfare and Development, Atmarani and Co., New Delhi.

JOURNALS

1. Social Welfare
2. Yojana
3. Balak
4. Indian Journal of Extension Education

Advanced Nutrition

Programme- B.Sc. Home Science	Year: IV	Semester:VIII

Course Description: The course Advanced Nutrition provides an in-depth understanding of the physiological and biochemical aspects of nutrition. It explores the relationship between nutrients and human health at the molecular level, with a focus on the role of nutrition in chronic diseases, metabolic pathways, and nutritional requirements across the lifespan. The course also emphasizes the importance of evidence-based nutrition interventions and the role of advanced nutrition research in improving public health.

Course Code:	Course Title: Advanced Nutrition

Course Objective:

1. To develop a comprehensive understanding of the metabolic functions of macro and micronutrients in the body.
2. To study the physiological and biochemical aspects of human nutrition and their relationship with health and disease.
3. To examine the role of nutrition in the prevention and management of chronic diseases.
4. To explore the current advancements in nutrition research and apply them to nutritional assessment and interventions.
5. To evaluate the nutritional requirements and dietary modifications across different stages of the human life cycle.

Course Outcomes:

1. Students will gain advanced knowledge of nutrient metabolism and its role in maintaining human health.
2. Students will be able to critically analyze the role of nutrition in disease prevention and management.
3. Students will understand the principles of nutritional requirements and how they change throughout the lifespan.
4. Students will develop skills to assess dietary intake and nutritional status using advanced techniques.
5. Students will be equipped with the knowledge to design and evaluate evidence-based nutritional interventions for individuals and populations.

Credits: 2+2	Course Type:DSE
Max. Marks: 100+50	Min. Passing Marks:40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**UNIT I: HUMAN NUTRIENT REQUIREMENTS – MACRONUTRIENTS** Methods of assessment of nutrient needs – a critical review • Critical evaluation of sensitive methods and derivations of requirements and recommended dietary allowances of macronutrients for all age groups: • Energy • Carbohydrates and dietary fiber • Proteins and amino acids • Lipids • Water • Critical evaluation of national and international nutrient allowances; factors affecting the requirements.	10

II	**UNIT II: INTERACTIONS OF NUTRITION, IMMUNITY AND INFECTION** • Host defense mechanisms and nutrients essential in the development of immune system. • Effect of Infections on the nutritional status of an individual. • Nutrient deficiencies and excesses affecting the immuno-competence and susceptibility to infections. • Operational implications.	5
III	**UNIT III: IMPROVING NUTRITIONAL QUALITY OF DIETS** • Ways of enhancing nutritional quality of diets. • Assessment of protein quality. • Dietary diversification. • Bioavailability of nutrients. • Nutrient losses during cooking and processing**.**	5
IV	**UNIT IV: EMERGING CONCEPTS IN HUMAN NUTRITION** • Ongoing nutrition transition and its implications. • Changing trends in life style patterns in population groups and their implications. • Nutrigenomics, Nutraceuticals, bioactive compounds.	5
V	**UNIT V: Nutrition management in special conditions:** • Space travel, high altitudes, low temperature and submarines.	5
Practical:	1. Assessment of micronutrient status: • Iron • Ash content of food product • Vitamin C 2. Assessment of macronutrients: • Moisture content of food product • Nitrogen • Fats • Carbohydrate: difference method • Fiber 3. Product development by using ingredients rich in macronutrients and micronutrients and Conduct a awareness program on it.	60

Suggested Readings:

1. Annual Reviews of Nutrition. Annual Review Inc, California, USA.
2. Shils, M.E.; Olson, J.; Shike, M. and Roos, C. (1998): Modern Nutrition in Health and Disease. 9th edition. Williams and Williams. A Beverly Co. London.
3. Bodwell, C.E. and Erdman, J.W. (1988) Nutrient Interactions. Marcel dekkerInc.NewYork
4. World Reviews of Nutrition and Dietetics.
5. WHO Technical Reports Series.
6. Indian Council of Medical Research. Recommended Dietary Intakesfor Indians- Latest Recommendations.
7. Indian Council of Medical Research. Nutritive Value of Indian Foods- Latest Publications.

Food Packaging and Sensory Evaluation

Programme- B.Sc. Home Science	Year: IV	Semester: VIII

Course Description: The course Food Packaging and Sensory Evaluation explores the principles and practices of food packaging, focusing on its role in preserving food quality, safety, and extending shelf life. It also delves into sensory evaluation techniques, assessing the sensory attributes of food products and their impact on consumer preferences and marketability. Students will learn to design packaging solutions that enhance product appeal while applying sensory evaluation methods to develop and improve food products.

Course Code:	Course Title: Food Packaging and Sensory Evaluation

Course Objective:

1. To understand the principles and functions of food packaging materials and technologies.
2. To explore the impact of packaging on food quality, safety, and shelf life.
3. To gain knowledge of sensory evaluation techniques and their application in food product development.
4. To analyze consumer preferences and perceptions related to food packaging and sensory attributes.
5. To develop skills in designing effective food packaging solutions and conducting sensory evaluations.

Course Outcomes:

1. Students will be able to identify various packaging materials and their suitability for different food products.
2. Students will understand the role of packaging in food preservation and safety.
3. Students will be proficient in conducting sensory evaluations and interpreting sensory data.
4. Students will be able to assess consumer preferences regarding food products and packaging.
5. Students will design packaging solutions that meet regulatory standards and consumer needs.

Credits: 2+2	Course Type: Major
Max. Marks: 100+50	Min. Passing Marks:40+20

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**Unit I: Fundamentals of Food Packaging** • **Introduction to Food Packaging**: Definition, objectives, and functions of food packaging. • **Types of Packaging Materials**: Overview of materials (plastics, glass, metals, paper), their properties, and applications. • **Packaging Technologies**: Vacuum packaging, modified atmosphere packaging (MAP), active and intelligent	10

	packaging.	
II	**Unit II: Packaging Design and Functionality** • **Design Considerations**: Aesthetics, functionality, cost, and sustainability in packaging design. • **Barrier Properties**: Understanding gas, moisture, and light barriers and their importance in food preservation. • **Regulatory Standards**: Overview of food packaging regulations and labeling requirements.	5
III	**Unit III: Sensory Evaluation Principles** • Introduction to Sensory Evaluation: Importance and applications in food science and technology. • Sensory Perception: Understanding human senses—taste, smell, sight, touch, and sound. • Evaluation Techniques: Descriptive analysis, difference tests, acceptance tests, and consumer preference studies.	5
IV	**Unit IV: Sensory Analysis in Food Product Development** • Product Development: Role of sensory evaluation in formulating and improving food products. • Consumer Preference: Assessing consumer preferences and market trends using sensory evaluation data. • Quality Control: Utilizing sensory evaluation for quality assurance in food production.	5
V	**Unit V: Trends and Innovations in Food Packaging and Sensory Evaluation** • **Emerging Technologies**: Smart packaging, biodegradable materials, and innovations in sensory technology. • **Sustainability in Packaging**: Trends towards sustainable packaging solutions and their impact on the environment. • **Case Studies**: Analyzing successful food packaging strategies and sensory evaluation applications in the industry.	5
Practical:	1. **Packaging Material Analysis**: Assess the physical and chemical properties of various packaging materials. 2. **Sensory Evaluation Testing**: Set up and conduct sensory tests, including triangle tests and hedonic scales.	60

	3. **Product Development Project**: Create a new food product, design its packaging, and evaluate it using sensory methods. 4. **Consumer Preference Study**: Conduct a survey or focus group to gather consumer feedback on packaging and sensory attributes of food products. 5. **Sustainability Project**: Investigate and present on sustainable packaging alternatives and their implications for the food industry.	

Suggested Readings:

- Food Packaging: Principles and Practice by Gordon L. Robertson
- Sensory Evaluation Techniques by M. Meilgaard, G.V. Civille, and B.T. Carr
- Food Packaging: Science and Technology by Joshipura, Ramesh
- Introduction to Sensory Evaluation by S. T. S. McDaniel and T. C. Huang
- Food Product Development: From Concept to the Marketplace by A. B. K. Schilling and L. S. R. F. Kauffman
- Sustainable Food Packaging Technology by Richard Coles
- Consumer Behavior in Food and Nutrition by David R. R. Gray and Brenda J. McMullen
- Handbook of Food Science, Technology, and Engineering by Y. H. Hui

Food Science

Programme- B.Sc. Home Science	Year: IV	Semester:VIII

Course Description:

The course Food Science provides an introduction to the scientific principles underlying the production, processing, and preservation of food. It covers the physical, chemical, and biological properties of food, exploring how these factors influence food quality, safety, and nutritional value. Students will gain practical skills through laboratory experiments and discussions on current trends in food technology and safety.

Course Code:	Course Title : Food Science

Course Objective:

1. To understand the fundamental concepts of food science, including the composition and properties of food.
2. To explore the principles of food processing and preservation techniques.
3. To examine the role of microbiology in food safety and spoilage.
4. To analyze the nutritional components of food and their impact on health.
5. To investigate current trends and advancements in food technology.

Course Outcomes:

1. Students will demonstrate knowledge of the chemical and physical properties of food components.
2. Students will be able to describe various food processing and preservation methods.
3. Students will understand the role of microorganisms in food safety and spoilage.
4. Students will evaluate the nutritional content of different foods and their health implications.
5. Students will apply scientific methods to investigate food science-related questions.

Credits:	Course Type-DSE
Max. Marks:100+50	Min. Passing Marks: 40+20

Total No. of Lectures:Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**UNIT 1: Unit I: Introduction to Food Science** • **Definition and Scope**: Overview of food science and its importance in society. • **Food Composition**: Basic components of food—water, carbohydrates, proteins, fats, vitamins, and minerals. **Food Quality**: Factors affecting food quality, including appearance, texture, flavor, and nutritional value. **FOOD CHEMISTRY** • Water: Definition of water in foods, structure, water activity, phasediagram of water, phase transition of food containing water, relation between water activity, temperature and WLF equation, interaction of water solute and food compounds, water activity and its influence on quality and stability of	10

	foods, methods for stabilization of food systems by control of water activity, sorption isotherm, colloidal properties of foods. • pH: Hydrogen ion concentration in food, oxidation reduction potential of foods and their applications in food systems. • Protein and Enzymes: Iso-electric points of proteins, proteins as enzymes in food system, its nature, stability and action, proteolysis, application of enzymes and immobilized enzymes. • Sugars: Composition and properties of different types of sugars, their application in food systems, crystallization, caramalization, Maillard reaction and its industrial application. • Lipids: Properties of fats, functional properties of fats and oils, fat stabilizers, fat deterioration and antioxidants, interesterification of fats.	
II	**Unit II: Food Processing Techniques** • **Principles of Food Processing**: Overview of primary and secondary processing methods. • **Preservation Techniques**: Methods including canning, freezing, drying, and fermentation. • **Food Additives**: Types, functions, and regulatory aspects of food additives.	5
III	**Unit III: Food Microbiology** • Microorganisms in Food: Types of microorganisms, their roles in food production, spoilage, and safety. • Foodborne Illness: Pathogens responsible for foodborne diseases and prevention strategies. • Quality Control: Techniques for monitoring microbial safety in food products.	5
IV	**Unit IV: Nutrition and Food** • Nutritional Components: Understanding macronutrients and micronutrients in food. • Metabolism: How the body processes food and the role of nutrition in health. • Dietary Guidelines: Analyzing dietary recommendations and food labeling.	5
V	**UNIT III: FOOD SAFETY LAWS AND STANDARDS** Hazard Analysis and Critical Control Points (HACCP), Good Manufacturing Practices (GMP), Good Hygienic Practices (GHP), International Organisation for Standardization (ISO), Essential Commodities Act, Codex Alimentarius, World Trade Organisation (WTO), Technical Barrier to Trades (TBT), Sanitary Phyto-Sanitary (SPS) rules, Bureau of Indian Standards (BIS), AGMARK, Food Safety and Standards Act, 2006 (FSSA): Prevention of Food Adulteration Act (PFA), Milk and Milk Products Order (MMPO), Meat Food Products Order (MFPO), Fruits Products Order (FPO).	5
Practical:	**PRACTICAL** 1. Effect of solutes on boiling point and freezing point of water. 2. Effects of types of water on characteristics of cooked vegetables, pulses andcereals.	60

	3. **Sugar and jaggery Cookery:** Relative sweetness, solubility and sizes of sugars, stages cookery, caramelizaation, crystallization, factors affecting crystal formation. 4. **Starches, vegetables gums and cereals**: Dextrinization, gelatinization, retrogration, thickening power, factors affecting gels. Gluten formation and factor affecting gluten formation 5. **Jams and jellies:** Pectin content of fruits, role of acid, pectin sugar in jam and jelly formation. Use of gums as emulsifier/stabilizers. 6. **Fats and oils:** Flash point, melting point and smoking point. Role of fats and oils in cookery as: shortening agents, frying medium. Factors affecting fat absorption. Fat crystals. Plasticity of fats. Permanent and semi-permanent emulsions. **7. Milk and milk products:** Scalding, denaturation, Effects of acid, salt, alkali, sugar, heat, enzymes, polyphenols on milk. Khoa,curd, paneer, cheese (ripened and unripened). **8. Egg:** Structure, assessing egg quality. Use of egg cookery and effect of heat. **9. Pulses:** Effect of various cooking and processing methods on various characterstics, **10. Meat and poultry**: Methods affecting tenderness of meat, effect of various methods of cooking and ingredients on color, volume, texture, flavor, aroma and water holding capacity. **11. Fruits and vegetables:** Pigments: Effects of cooking, metals ions, pH, Effect of various cooking processes on different characteristics of vegetables. **12. Leavened Products**: Fermentation- Use of micro-organism (lactic acid, yeast). **13. Beverages:** Factors affecting quality of beverages.	

Suggested Readings:

1. Bureau of Indian standards: Specifications and standard methods. Volume I to XII.
2. Fellows P J (2002), Food Processing Technology- Principles and
3. Practices, 2nd Edition. Woodhead Publishing Ltd.
4. Food and Agriculture Organization. (1980) Manual of Food Quality Control. Additive Contaminants Techniques. Rome.
5. Fuller, G.W. (1999) New Food Product Development. From concept to market place. CRC press, New York.
6. Graf E and Saguy I S, (1991) Principles and practices for the safe processing of foods. Butterw Heinemann Ltd., Oxford.
7. Mahindru, S N (2000) Food Additives- Characteristics Detection and Estimation. Tata McGraw Hill Publishing Co. Ltd.

Nutrition for Health and Fitness

Programme- B.Sc. Home Science	Year: IV	Semester: VIII
Course Description:		
Course Code:	**Course Title : Nutrition for health and fitness**	

Course Objective:

- Understand the components of Health and fitness and the role of nutrition in these.
- Make nutritional, dietary and physical activity recommendations to achieve fitness and well-being
- Develop ability to evaluate fitness and well-being.

Course Outcomes:

1. Demonstrate an understanding of the components of health and fitness, including the role of nutrition.
2. Provide informed nutritional, dietary, and physical activity recommendations to promote fitness and overall well-being.
3. Develop the skills to assess and evaluate personal fitness levels and overall well-being effectively.

Credits: 2+2	Course Type- DSE
Max. Marks: 100+50	Min. Passing Marks: 60

Total No. of Lectures: Theory(30)+Practical(60)

Units	Topic	No. of Lectures
I	**HEALTH AND WELLNESS** Definition,Factors affecting Health and Wellness. Physiolo psychological and social health	5
II	**BASIC OF FITNESS** - Basic Nutrition: Relation between foods and nutrition - Nutrients: Macro nutrients-their functions, food sources, digestion, absorption, Deficiency symptoms and toxicity. Micro nutrients: functions, food sources digestions and absorption, deficiency and toxicity. - Non nutrient components: their association to health. - Fluid balance: Water compartments in human body, fluid regulation water intake in different conditions, dehydration and water intoxication. Recommended dietary allowances and balanced diet.	10
III	**NUTRITIONAL STATUS** - Nutritional status: Definition, methods to assess nutritional status- (Relevant to maintenance of fitness), Specific fitness and health status.	5
IV	**MANAGEMENT OF FITNESS** - Approaches to the management of fitness and health; - Diet and exercise: Effect of specific nutrients on work performance and physical fitness. - Fuel and other nutrients that support physical activity (metabolic pathways) Mobilization of fuel stores during exercise. Importance of carbohydrate loads. Nutrition, exercise, physical	5

	fitness and health- their inter relationship	
V	**SPORTS, YOGA AND HEALTH** - Nutrition in sports: Sports specific requirements, diet manipulation pre game and post game meals, - Use of different nutragenic aids and commercial supplements. Sports drinks. Diets for persons with high energy requirements stress, fracture and injury. Significance of physical fitness and nutrition in prevention and management of weight control regimes. - Nutrition guidelines for maintenance of health and fitness. Awareness about the alternative systems for health and fitness, like ayurveda, yoga, Meditation, vegetarianism and traditional diets.	5
Practical:	1. Market survey of commercial nutritional supplements and nutritional support substrates 2. Visit to yoga and meditation centers **3.** Assessment of nutritional status using physical methods **4.** Planning diets and formulating dietary guidelines for: • Fitness and health • Prevention of Chronic degenerative disorders • Obesity management • Management of diabetes mellitus and CVD 5. Product development by using ingredients rich in Nutrients sand Conduct an awareness program on it.	60

Suggested Readings:

1. Sizer, F.& Whitney, E. (2002): Nutrition – Concepts & controversies, 8th Edition, wadsworth Thomson Learning.
2. Mahan, L.K. &Ecott-Stump, S. (2000): Krause's Food, Nutrition and Diet Threapy, 10th Ed W.B.Saunders Ltd.
3. Ira Wolinksy (Ed) (1998): Nutrition in Exercise and sports, 3rd Edition, CRC Press.
4. McArdle, W. Katch, F. and Katch, V. (1996) Exercise Physiology. Energy, Nutrition and Hu Performance, 4th edition, Williams and Wilkins, Philadelphia.
5. Shils, M.E., Olson, J.A., Shike, N. and Ross, A.C. (Ed) (1999): Modern Nutrition in Health Disease, 9th Edition Williams &wilkins.
6. Parizkova, J. Nutrition, Physical activity and health in early life.Ed. Wolinksky, CRCPress.