



# University of Rajasthan Jaipur

## SYLLABUS

(Three/Four Year Under Graduate Programme)

**B.Sc. -Home Science**

**I & II Semester**

**Examination-2023-24**

As per NEP - 2020

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(Academic)  
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Jaipur

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## Structure of Four Year's Bachelor of Science (Home Science)

Programme Code	UG0808	Programme Faculty	Science	Programme Name	Four Year Bachelor of Science (Home- Science)
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**Eligibility / Pre-requisite of the Programme-12<sup>th</sup> Class from CBSE or Rajasthan Board or recognised Board**

**Degree Name -Four Year Bachelor of Science (Home- Science)**

**Entry and Exit Policy**

Programme Name	Degree Name	Exit Year
Four Year Bachelor of Science (Home- Science)	Certificate in Home Sc.	I Year
	Diploma in Home Sc.	II Year
	Bachelor of Science (Home Sc.)	III Year
	Bachelor of Science (Home Sc. Hons.) / B.Sc. (Home Sc. Hons.)	IV Year
	Bachelor of Science (Home Sc. Hons. With Research) / B.Sc. (Home Sc. Hons. With Research)	

### List of Major, Minor and Interdisciplinary/Multidisciplinary Subjects-

#### Programme Outcome – Learning outcomes of the Course


The five subjects of Home Science are Food and Nutrition, Human Development and Childhood Studies, Resource Management and Design Application, Development Communication and Extension and Fabric and Apparel Sciences.

Years of national and international experience in the field has contributed to the wisdom that all the five windows of opportunity that Home Science offers be opened, i.e. Food and Nutrition, Human Development and Childhood Studies, Resource Management and Design Application, Development Communication and Extension and Fabric and Apparel Sciences. In this course, the students will learn the fundamental principles and foundations of all the five areas. They are expected to internalize the principle of a Home Scientist, that is, to give back to the community from which they draw, for sustainable development. This is a major contribution of Home Science in both developed and developing societies.

#### Programme Objective –

The objectives of the present B.Sc. Program Home Science course are:

- To understand and appreciate the role of interdisciplinary sciences in the development and well- being of individuals, families and communities
- To learn about the sciences and technologies that enhance quality the life of people
- To acquire professional and entrepreneurial skills for economic empowerment of the student in particular, and community in general

  
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- To develop professional skills in food, nutrition, textiles, housing, product making, communication technologies and human development
- To take science from the laboratory to the people

**SEMESTER-I**

Course Code	Course Title	Course Type	L	T	P	Credit
HSC 51T 101	Communication and Extension Theory	Discipline Centric Core (Major)	4	0	0	4
HSC 51P 102	Communication and Extension Practical	Discipline Centric Core (Major)	0	0	2	2
HSC 51T 103	Resource management Theory	Discipline Centric Core (Major)	4	0	0	4
HSC 51P 104	Resource management practical	Discipline Centric Core (Major)	0	0	2	2
HSC 51T 105	Fashion Studies Theory	Discipline Centric Core (Major/Minor)	4	0	0	4
HSC 51P 106	Fashion Studies Practical	Discipline Centric Core (Major/Minor)	0	0	2	2
AEC	Language-Hindi	Ability Enhancement Course	4	0	0	4
SEC 1		Skill Enhancement Course	2	0	0	2
VAC 1		Value Added Course				2
<b>Total Credit</b>						<b>26</b>

**SEMESTER-II**

Course Code	Course Title	Course Type	L	T	P	Credit
HSC 52T 107	Fundamentals of Nutrition and Food Science Theory	Discipline Centric Core (Major)	4	0	0	4
HSC 52P 108	Fundamentals of Nutrition and Food Science Practical	Discipline Centric Core (Major)	0	0	2	2
HSC 52T 109	Foundation of Human Development Theory	Discipline Centric Core (Major)	4	0	0	4
HSC 52P 110	Foundation of Human Development Practical	Discipline Centric Core (Major)	0	0	2	2
HSC 52T 111	Fundamentals of Textiles Theory	Discipline Centric Core (Major/Minor)	4	0	0	4
HSC 52P 112	Fundamentals of Textiles Practical	Discipline Centric Core (Major/Minor)	0	0	2	2
AEC	Language-English	Ability Enhancement Course	4	0	0	4
SEC 2		Skill Enhancement Course	2	0	0	2
VAC 2		Value Added Course				2
<b>Total Credit</b>						<b>26</b>

Credits offered for 1-year certificate: Year I Internship Total credits

52 + 4 = 56

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For exit after 1<sup>st</sup> year, minimum credit requirement is 48 from the course and 4 credits from the internship, hence the certificate is @52 credits. After 1<sup>st</sup> year Internship mandatory for exiting at this stage.

**PROGRAMME CODE – UG0808****Programme Faculty – Science****Programme Name-Four Year Bachelor of Science (Home- Science)****SEMESTER – I****CORE COURSE I**

Code of the Course	Title of the Course	Level of Course	Credits of course
HSC 5IT 101	Communication and Extension	5	4
HSC 5IP 102	Communication and Extension	5	2
Type of Course		Delivery Type of the Course	
Major		Theory- Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours Practical- Laboratory work and field visits.	
Prerequisites	Central Board of Secondary Education or equivalent.		
Objectives of the Course (Theory)	<ul style="list-style-type: none"> <li>To acquaint students with the basic concepts and process of communication</li> <li>To sensitize the students and help them to understand the scope of communication and its importance in development</li> <li>To enable students, understand the barriers to human communication and various aspects of effective communication</li> <li>To make the students understand the concept of Extension and its related aspects.</li> </ul>		
Objectives of the Course (Practical)	<ul style="list-style-type: none"> <li>To develop skills in planning and execution of a small group communication activity.</li> <li>To develop skill in designing and use of graphic media</li> </ul>		

Theory Credit -4

60 Hours

HSC 5IT 101- Communication and Extension

**Syllabus -**

Max. Marks: 20 + 80 marks

Min. Pass Marks: 8+ 32 marks

**Unit 1 Communication: Concepts**

18

- Historical background, concept and nature
- Functions of Communication.
- Types of Communication-Formal and informal communication, Verbal and Non-Verbal Communication
- Communication and mainstream media -newspaper, radio, television and Cinema, ICTs and web- based communication
- Scope of Communication- Education, training and learning industry, Motivation and Management, Corporate Communication, Management of Organizations, Advertising and Public relations
- Communication for Social change

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## Unit 2 Understanding Human Communication

16

- Culture and communication- Signs, symbols and codes in communication
- Postulates/Principles of Communication
- Elements of Communication and their characteristics
- Models of Communication
- Barriers to Communication

## Unit 3 Communicating Effectively

10

Concept nature and relevance to communication process:

- Empathy
- Persuasion
- Perception
- Listening
- Fidelity
- Heterophily and Homophily

## Unit 4 Communication for Extension

16

- Concept, Nature and Philosophy of Extension education
- Process and Principles of Extension education
- Extension Worker: Qualities and Role
- Home Science Extension: Concept, Scope and its role in national development
- Relationship between, Communication, Extension and Development

### Suggested books and reference including links to e-resources –

- Barker, L. (1990). "Communication", New Jersey: Prentice Hall, Inc; 171.
- Chouhan, A. and Dhawan. D. (2022): Home Science as a vocational subject: Challenges and opportunities, Star publications, Agra
- Dahama O.P. (1988) : Education and Communication for Development, Oxford and IBH Publishing Co. Pvt. Ltd. New –Delhi
- Devito, J. (1998) Human Communication. New York: Harper & Row.
- Jain, R. (1993) Mass Media and Rural Development. Voll. II Manak Publication Pvt. Ltd. New-Delhi
- Patri and Patri (2002); Essentials of Communication. Greenspan Publications
- Supe , S.V. (1997) An Introduction to Extension Education. Oxford IBH Publishing Co. Pvt. Ltd. , New-Delhi.
- Uttam Kumar Singh and A K Nayak , (1997) Extension Education, Commonwealth Publishers in association with Dr. Zakir Hussain Institute of Non-formal and Continuing Education.
- <https://www.iaritoppers.com/2019/06/communication-skills-icar-e-course-pdf-book-download.html>
- <https://www.agrimoon.com/wp-content/uploads/COMMUNICATION-SKILLS.pdf>
- <https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=8x0nJkh/R0vHkX1U70/Z/CQ==>
- <https://egyankosh.ac.in/bitstream/123456789/9796/1/Unit-1.pdf>
- <http://ecoursesonline.iasri.res.in/course/view.php?id=161>

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- [https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp\\_content/S000827HE/P001412/M011632/ET/1458297353H12EE01Q1.pdf](https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000827HE/P001412/M011632/ET/1458297353H12EE01Q1.pdf)
- <http://ecoursesonline.iasri.res.in/course/view.php?id=93>
- <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=15405>
- <https://icar.org.in/files/English-Unit/Home%20Science/COMMUNICATION%20FOR%20DEVELOPMENT.html>

### Learning Outcome of the Course –

- Understand communication process and its importance.
- Be familiar with and be able to use different communication media.
- Be acquainted with concept of extension and its related aspects.
- Understand the role of communication in extension and development.

### SEMESTER – I

### CORE COURSE I – HSC-51P 102

Practical Credit -2

30 Practicals (2 hours each)

### HSC 51P 102- Communication and Extension

#### 1. Syllabus –

- |  |    |
|--|----|
| 1) Developing skill in planning and conducting small group communication.<br>(any two)                                       | 13 |
| <ul style="list-style-type: none"> <li>• Meeting</li> <li>• Discussion/ FGD</li> <li>• Debate</li> <li>• Workshop</li> </ul> |    |

(Planning criteria – selection of the topic, formulation of broad outline, specifying the objective)

- |                                       |    |
|---------------------------------------|----|
| 2) Designing and use of graphic media | 10 |
| 3) Review of media on selected issues | 7  |

#### 2. Scheme of Examination - Practical exam scheme: (Total 50 marks)

- Internal marks: 10 marks
- Planning of a small group communication activity -20 marks
- Designing of a graphic aid: 20 marks

#### 3. Suggested books and reference including links to e-resources –

- Dahama O.P. (1988) : Education and Communication for Development, Oxford and IBH Publishing Co. Pvt. Ltd. New –Delhi
- Devito, J. (1998) Human Communication. New York: Harper & Row.
- Dua, M.R. and Gupta V.S. Media and Development, AMIC Singapole and HarAnand Publications, New Delhi, 1994.
- Jain, R. (1993) Mass Media and Rural Development. Voll. II Manak Publication Pvt. Ltd. New-Delhi
- Mehta SR (Ed.). Communication and Development: Issuer and Perspective, Rawat Publications. Jaipur 1992

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- Modi Bella: Designing Message for Development Communication and Audience Participation- Based Approach, Sage Publications, New Delhi, 1991.
- Patri and Patri (2002); Essentials of Communication. Greenspan Publications
- Umme, K. Information communication Technology in Education, H. P. Bhargave Book House, Agra, 2008.
- <https://flearningstudio.com/how-to-design-visual-aids-for-teaching-purpose/>
- <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=65951>

#### Learning Outcome of the Course -

- Acquire skill in planning and execution of a small group communication activity.
- Understand the use of communication media.
- Acquire skill in designing a graphic media.

#### SEMESTER – I CORE COURSE II

Code of the Course	Title of the Course	Level of Course	Credits of course
HSC 5IT 103	Resource Management	5	4
HSC-51P 104	Resource Management	5	2
Type of Course		Delivery Type of the Course	
Major		Theory- Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours Practical- Laboratory work and field visits.	
Prerequisites	Central Board of Secondary Education or equivalent.		
Objectives of the Course (Theory)	<ul style="list-style-type: none"> <li>• To introduce students to the fundamental concepts and principles of resource management in various contexts.</li> <li>• To develop skills for identifying, conserving, and sustainably managing resources.</li> <li>• To understand the scientific processes and application of managerial activities for resource utilization.</li> </ul>		
Objectives of the Course (Practical)	<ul style="list-style-type: none"> <li>• To introduce students to the fundamental concepts and principles of resource management in various contexts.</li> <li>• To develop skills for identifying, conserving, and sustainably managing resources.</li> <li>• To understand the scientific processes and application of managerial activities for resource utilization.</li> </ul>		

Theory Credit -4

60 Hours

HSC 5IT 103- Resource Management

#### Syllabus –

Max. Marks: 20 + 80 marks

Min. Pass Marks: 8+ 32 marks

#### Unit 1: Introduction to Resource Management

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

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- Motivation theory

**Unit 2: Resources and Sustainability**

- Meaning, classification, and characteristics of resources
- Factors affecting resource utilization
- Maximizing resource use and conservation
- Availability and management of specific resources (money, time, energy, space)
- Sustainable utilization of resources
- Application of management process in event planning and execution

**Unit 3: Functions of Management: An overview**

- Decision making
- Planning
- Supervising
- Controlling
- Organizing
- Evaluation

**Unit 4: Resource Management in Organizational Context**

- Organizational resource management
- Human resource management
- Financial resource management
- Information resource management
- Strategies for effective resource allocation and utilization

**Suggested books and reference including links to e-resources –**

- Koontz, H., & O'Donnell, C. (2005). Management – A systems and contingency analysis of managerial functions. New York: McGraw-Hill Book Company.
- Kreitner (2009). Management Theory and Applications. Cengage Learning: India.
- Rao, V.S., & Narayana, P.S. (2007). Principles and Practices of Management. Konark Publishers Pvt. Ltd.
- Goel, S. (Ed.). (2016). Management of Resources for Sustainable Development. New Delhi: Blackswan Publications.
- Arora, R., Magu, P., Singh, P., Meghna, & Gupta, S. (2013). Resource Management: An Introductory Manual. Elite Publishing House Pvt. Ltd.
- Mital, M., & Sawhney, H. K. (2015). Family Finance and Consumer Studies. Elite Publishing House Pvt. Ltd.
- Rao, V.S., & Narayana, P.S. (2007). Principles and Practices of Management. Konark Publishers Pvt. Ltd.
- Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., ... & van den Belt, M. (1997). The value of the world's ecosystem services and natural capital. Nature, 387(6630), 253-260.
- Meadows, D. H., Meadows, D. L., Randers, J., & Behrens III, W. W. (1972). The limits to growth. Universe Books.

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## Learning Outcome of the Course –

- Comprehend the concept, scope, and application of management in different facets of life.
- Understand the classification, characterization, and skillful management of resources.
- Recognize the significance and functions of management in various fields.
- Gain knowledge about resource availability and utility during different stages of the family life cycle.
- Develop skills for energy, time, and monetary resource management.
- Acquire decision-making abilities, SWOT analysis, and time and resource planning for self and family.
- Understand work simplification techniques, managerial skills, and sustainability.

### SEMESTER – I

#### CORE COURSE II – HSC-51P 104

Practical Credit -2

30 Practicals (2 hours each)

#### HSC-51P 104- Resource Management

##### 1. Syllabus –

1. Resource conservation and optimization/green technologies (natural resources)
2. Identification and development of self as a resource
  - SWOT analysis and Micro lab
  - Building decision-making abilities through management games
3. Preparation of time plans for self and family
4. Time and Motion Study
5. Case studies and real-world application of resource management principles
6. Group projects on sustainable resource management

##### 2. Suggested books and reference including links to e-resources –

- Koontz, H., & O'Donnell, C. (2005). Management – A systems and contingency analysis of managerial functions. New York: McGraw-Hill Book Company.
- Kreitner (2009). Management Theory and Applications. Cengage Learning: India.
- Rao, V.S., & Narayana, P.S. (2007). Principles and Practices of Management. Konark Publishers Pvt. Ltd.
- Goel, S. (Ed.). (2016). Management of Resources for Sustainable Development. New Delhi: Blackswan Publications.
- Arora, R., Magu, P., Singh, P., Meghna, & Gupta, S. (2013). Resource Management: An Introductory Manual. Elite Publishing House Pvt. Ltd.
- Mital, M., & Sawhney, H. K. (2015). Family Finance and Consumer Studies. Elite Publishing House Pvt. Ltd.
- Rao, V.S., & Narayana, P.S. (2007). Principles and Practices of Management. Konark Publishers Pvt. Ltd.
- Costanza, R., d'Arge, R., de Groot, R., Farber, S., Grasso, M., Hannon, B., ... & van den Belt, M. (1997). The value of the world's ecosystem services and natural capital. *Nature*, 387(6630), 253-260.

- Meadows, D. H., Meadows, D. L., Randers, J., & Behrens III, W. W. (1972). The limits to growth. Universe Books.

**Learning Outcome of the Course –**

- Apply techniques and strategies for conserving and optimizing natural resources.
- Understand the principles and practices of green technologies for sustainable resource management.
- Conduct a comprehensive SWOT analysis to assess personal strengths, weaknesses, opportunities, and threats.
- Apply micro lab techniques to develop and enhance personal skills and abilities.
- Demonstrate improved decision-making abilities through participation in management games.
- Create effective time plans that prioritize tasks and activities for personal and family management.
- Develop skills in time management, scheduling, and setting achievable goals.
- Apply time and motion study techniques to analyze and improve efficiency in personal and professional tasks.
- Identify areas of improvement for time utilization and resource optimization.

**SEMESTER – I**  
**CORE COURSE III**

Code of the Course	Title of the Course	Level of Course	Credits of course
HSC-51T 105	Fashion Studies	5	4
HSC-51P 106	Fashion Studies	5	2
<b>Type of Course</b>		<b>Delivery Type of the Course</b>	
<b>Major/Minor</b>		<b>Theory-</b> Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours <b>Practical-</b> Laboratory work and field visits.	
<b>Prerequisites</b>	Central Board of Secondary Education or equivalent.		
<b>Objectives of the Course (Theory)</b>	<ul style="list-style-type: none"> <li>• To impart knowledge about functions and theories of clothing.</li> <li>• To understand the basics of fashion and fashion industry.</li> <li>• To develop sensitivity towards selection of garments and garment design.</li> <li>• Understand basics of design.</li> </ul>		
<b>Objectives of the Course (Practical)</b>	<ul style="list-style-type: none"> <li>• To teach students the basics of designing</li> <li>• To make them learn the application of these to apparels</li> <li>• To familiarize them to the rich heritage design through visits.</li> <li>• To introduce the basics of Fashion Drawing</li> </ul>		

**Theory Credit -4**

**60 Hours**

**HSC-51T 105- Fashion Studies**

**Syllabus –**

**Max. Marks: 20 + 80 marks**

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**Min. Pass Marks: 8+ 32 marks**

**Unit 1 Importance of clothing**

**15**

- Clothing functions and theories of origin
- Clothing terminology

- Individuality and conformity, conspicuous consumption and emulation
- Selection of clothes for self
- Selection and Evaluation of ready-made garments

#### Unit 2 Fashion

15

- Terminology
- Fashion cycle
- Sources of fashion
- Factors favouring and retarding fashion
- Fashion Forecasting-Seasons, sources, steps in forecasting

#### Unit 3 Adoption of fashion, fashion Centers and designers.

15

- Consumer groups- fashion leaders, followers
- Adoption process- Trickle-down theory, bottom up theory & trickle across theory
- Role of designer
- Fashion centres and leading designers

#### Unit 4 Design

15

- Elements and principles of design
- Structural and applied design
- Introduction to Basic Textile designing – Motif and repeat
- Types of design :- Natural, stylised, geometrical and abstract

#### Suggested books and reference including links to e-resources –

Brown, Patty, Rice J., 1998, Ready to Wear Apparel Analysis. Prentice Hall.

- Marshall S G, Jackson H O, Stanley MS, Kefgen M & Specht T, 2009, Individuality in Clothing & Personal Appearance, 6th Edition, Pearson Education, USA.
- Tate S.L., Edwards M.S., 1982, The Complete Book of Fashion Design, Harper and Row Publications, New York.
- [https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp\\_content/S000827HE/P001410/M011375/ET/1541073865H07FD01-QI.pdf](https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000827HE/P001410/M011375/ET/1541073865H07FD01-QI.pdf)
- [https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp\\_content/S000827HE/P001410/M011391/ET/1526964532H07FD08-QI.pdf](https://epgp.inflibnet.ac.in/epgpdata/uploads/epgp_content/S000827HE/P001410/M011391/ET/1526964532H07FD08-QI.pdf)
- <http://www.overdrive.com/>
- <http://www.scribd.com/>
- <http://www.gutenberg.org/>
- <https://www.fitnyc.edu/library/>
- <https://www.wgsn.com/>
- <https://fashionunited.com/>
- <https://www.businessoffashion.com/>
- <https://www.voguebusiness.com/>

#### Learning Outcome of the Course -

- Identify the role and functions of clothing and recognize the factors affecting selection and evaluation of clothing.

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- Explain the concept of fashion, its terminology, sources and factors affecting it.
- Describe the global fashion industry and its leading designers.
- Classify and illustrate various components of garment.
- Apply the knowledge of elements and principles in design interpretation.

## SEMESTER – I

### CORE COURSE III – HSC-51P 106

Practical Credit -2

30 Practicals (2 hours each)

#### HSC-51P 106- Fashion Studies

##### 1. Syllabus –

- 1) Identification of structural and applied design component in garments. 2
- 2) Interpretation of elements and principles of design concepts from print and visual mediums. 2
- 3) Introduction to elements of design. 10
  - Line and form – through drawings
  - Colour – colour wheel, grey scale and value scale, intensity scale, colour schemes.
  - Textures- different textures through different mediums
  - Illustration techniques – strokes, hatching, shading; colouring techniques – medias for colouring.
- 4) Visit to Exhibition/ Musuem and Preparation of port folio based on the visit. 4
  - Natural
  - Stylised
  - Geometrical
  - Abstract.
  - Traditional embroidery motifs
- 5) Fashion sketching 10
  - Technical drawing of fashion details: sleeves , yolks & necklines, bodices and skirts
  - Drawing stick figures and Block figure
  - Designing & Dressing on a croquie
  - Formal & Traditional Wear
- 6) Market survey on different clothing brands to study the available styles, colours, materials and labels. 1
- 7) Market survey on various trims and garment accessories. 1

##### 2. Suggested books and reference including links to e-resources –

- Brown, Patty, Rice J., 1998, Ready to Wear Apparel Analysis. Prentice Hall.
- Marshall S G, Jackson H O, Stanley MS, Kefgen M & Specht T, 2009, Individuality in Clothing & Personal Appearance, 6th Edition, Pearson Education, USA.
- Tate S.L., Edwards M.S., 1982, The Complete Book of Fashion Design, Harper and Row Publications, New York
- Liechty, E.G., Potterberg, D.N., Rasband, J.A., 2010, Fitting and Pattern Alteration: A Multimethod Approach, Fairchild Publications, New York

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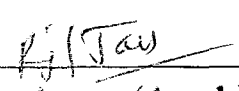
- Fringes G.S., 1994, *Fashion from Concept to Consumer*, 6th edition, Printice Hall, New Jersey.
- Ireland, P.J. 2003, *Introduction to Fashion Design*, B.T. Batsford, London.
- R. Andrew, 2018, *Key Concepts for Fashion Industry*, Bloomsbury Publishing, India.
- <http://www.coursera.org/>
- <http://www.udemy.com/>
- <http://www.skillshare.com/>
- <http://www.fashionary.org/>
- <https://egyankosh.ac.in/handle/123456789/61101>

#### Learning Outcome of the Course –

- Student will be able to understand and interpret design components of a garment
- Will learn the basic drawing techniques
- They will develop skill in elementary Fashion drawing
- Students will have an idea of available accessories, trims and brands and details about them

#### SEMESTER – II CORE COURSE IV

Code of the Course	Title of the Course	Level of Course	Credits of course
HSC-52T 107	Fundamentals of Nutrition and Food Science	5	4
HSC-52P 108	Fundamentals of Nutrition and Food Science	5	2
<b>Type of Course</b>		<b>Delivery Type of the Course</b>	
<b>Major</b>		<b>Theory-</b> Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours <b>Practical-</b> Laboratory work and field visits.	
<b>Prerequisites</b>	Central Board of Secondary Education or equivalent.		
<b>Objectives of the Course (Theory)</b>	The course will enable the students to: <ul style="list-style-type: none"> <li>• Understand the concept of nutrients in relation to foods and food groups.</li> <li>• Understand the details of various nutrients with respect to health.</li> <li>• Plan and prepare nutrient rich recipes based on principles of cooking.</li> </ul>		
<b>Objectives of the Course (Practical)</b>	<ul style="list-style-type: none"> <li>• To be aware about the availability of various food items in different categories in the market.</li> <li>• To prepare nutrients rich recipes from different food groups by accurately weighing ingredients.</li> <li>• Set table for various meals</li> </ul>		

  
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Theory Credit -4

HSC-52T 107- Fundamentals of Nutrition and Food Science

60 Hours

**Syllabus –****Max. Marks: 20 + 80 marks****Min. Pass Marks: 8+ 32 marks****Unit 1 Basic concepts in foods and nutrition** **5**

- Basic terms used in study of foods and nutrition
- Understanding relationship between foods, nutrition and health
- Functions of food-Physiological, psychological and social

**Unit 2 Nutrients** **20**

Functions, dietary sources and clinical manifestations of deficiency/ excess of the following nutrients:

- Carbohydrates, lipids and proteins
- Fat soluble vitamins-A, D, E and K
- Water soluble vitamins – thiamin, riboflavin, niacin, pyridoxine, folate, vitamin B12 and vitamin C
- Minerals – calcium, iron and iodine

**Unit 3 Food Groups** **25**

Selection, nutritional contribution and changes during cooking of the following food groups:

- Cereals
- Pulses
- Fruits and vegetables
- Milk & milk products
- Eggs
- Meat, poultry and fish
- Fats and Oils

**Unit 4 Methods of Cooking and Preventing Nutrient Losses** **10**

- Dry, moist, frying and microwave cooking
- Advantages, disadvantages and the effect of various methods of cooking on nutrients
- Minimising nutrient losses

**Suggested books and reference including links to e-resources –**

- Srilakshmi (2018). Food Science, 7th Edition. New Age International Ltd.
- Bamji MS, Krishnaswamy K, Brahmam GNV (2009). Textbook of Human Nutrition, 3rd edition. Oxford and IBH Publishing Co. Pvt. Ltd.
- Srilakshmi (2019). Dietetics, 8th Edition. New Age International Ltd.
- Wardlaw and Insel MG, Insel PM (2004). Perspectives in Nutrition, Sixth Edition. Mosby.
- Chadha R and Mathur P (eds). Nutrition: A Lifecycle Approach. Orient Blackswan, Delhi. 2015
- [https://www.who.int/health-topics/nutrition#tab=tab\\_1](https://www.who.int/health-topics/nutrition#tab=tab_1)
- <https://www.who.int/news-room/fact-sheets/detail/anaemia>
- <https://www.who.int/news-room/fact-sheets/detail/healthy-diet>
- <https://www.who.int/news-room/fact-sheets/detail/malnutrition>
- <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>

- <https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=NuAs6SreCGryddEfs4kKBA==>
- <https://egyankosh.ac.in/handle/123456789/44151>
- <https://egyankosh.ac.in/handle/123456789/32947>
- <https://egyankosh.ac.in/handle/123456789/11137>
- <http://ecoursesonline.iasri.res.in/course/view.php?id=131>

### Learning Outcome of the Course –

- Learners will be able to identify the respective nutrients in relation to various foods and food groups.
- Learners will be able to identify the clinical manifestations of excess/deficiency of various nutrients.
- Learners will be able to plan nutrient rich recipes based on principles of cooking methods.

### SEMESTER – II

### CORE COURSE IV – HSC-52P 108

Practical Credit -2

30 Practicals (2 hours each)

### **HSC-52P 108- Fundamentals of Nutrition and Food Science**

#### 1. Syllabus –

- 1) Weights and measures; preparing market order and table setting
- 2) Food preparation, understanding the principles involved, nutritional quality and portion size
  - Beverages: Hot tea/coffee, Milk shake/ lassi, fruit based beverages
  - Cereals: Boiled rice, pulao, chapatti, parantha, puri, pastas
  - Pulses: Whole, dehusked
  - Vegetables: curries, dry preparations
  - Milk and milk products
  - Egg preparations: Boiled, poached, fried, scrambled, omelettes, egg pudding
  - Soups: Broth, plain and cream soups, stocks
  - Baked products: Biscuits/cookies, cream cakes, sponge cake preparations, tarts and pies
  - Snacks: pakoras, cutlets, samosas, upma, poha, sandwiches, pizza
  - Salads: salads and salad dressings.

#### 2. Scheme of Examination –

- Practical exam (total 50 marks)
- Internal and record: 10 marks
- Planning of two recipes: 20 marks
- Preparation of two recipes: 20 marks

#### **Suggested books and reference including links to e-resources –**

- Khanna K, Gupta S, Seth R, Mahna R, Rekhi T (2004). The Art and Science of Cooking: A Practical Manual, Revised Edition. Elite Publishing House Pvt Ltd.

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- Raina U, Kashyap S, Narula V, Thomas S, Suvira, Vir S, Chopra S (2010). Basic Food Preparation: A Complete Manual, Fourth Edition. Orient Black Swan Ltd.
  - <http://ecoursesonline.iasri.res.in/course/view.php?id=184>
  - <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=19593>
  - <http://ecoursesonline.iasri.res.in/mod/page/view.php?id=19575>

#### Learning Outcome of the Course –

- Learners will be able to plan recipes with accurately weighed ingredients.
- Learners will be able to set table correctly for various meals and courses.
- Learners will be able to prepare food recipes based on principles of cooking methods with specific portion sizes and nutritional compositions.

#### SEMESTER – II

#### CORE COURSE V

Code of the Course	Title of the Course	Level of Course	Credits of course
HSC-52T 109	Foundation of Human Development	5	4
HSC-52P 110-	Foundation of Human Development	5	2
Type of Course		Delivery Type of the Course	
Major		<b>Theory-</b> Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours <b>Practical-</b> Laboratory work and field visits.	
<b>Prerequisites</b>	Central Board of Secondary Education or equivalent.		
<b>Objectives of the Course (Theory)</b>	<ul style="list-style-type: none"> <li>• To learn about areas and importance of Human Development.</li> <li>• To develop insight of different developmental stage with respective growth and development so as to deal with development challenges.</li> <li>• Understanding Development Psychology for academics, research and vocation.</li> </ul>		
<b>Objectives of the Course (Practical)</b>	<ul style="list-style-type: none"> <li>• Hands on experience for neonatal care.</li> <li>• Skills development regarding care of neonates and infants.</li> <li>• Preparation of effective teaching material.</li> </ul>		

Theory Credit -4

60 Hours

HSC-52T 109- Foundation of Human Development

#### Syllabus –

Max. Marks: 20 + 80 marks

Min. Pass Marks: 8+ 32 marks

#### Unit 1 Understanding Human Development

15

- Historical perspective of Human Development (Brief)
- Definitions, scope and multidisciplinary nature of Human Development
- Principles of Growth and Development, Factor affecting Growth and Development.

#### Unit II Prenatal Development and Birth

15

- Stages and domains in life Span development

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- Developmental tasks/ Milestones across life span
- Conception, Stages of Prenatal Development, prenatal assessment, Birth and birth process, complication and managements

### Unit – III Neonatal Care

15

- Introduction to neonatal care: definition, concept and principles of neonatal care
- Risk factors for neonates at anti-natal and intra-natal periods.
- Family centre care – communicating with parents, family and health care team.

### Unit – IV Assessment and Challenges

15

- Assessment of Neonate (APGAR, Reflexes)
- Common ailments during neonatal stage
- Care of new born: Immediate and daily care, home care, kangaroo care, Neonatal feeding
- Impact of child birth on mother's overall well being

### Suggested books and reference including links to e-resources –

- Berk, L. E. (2007). Development through the lifespan. Delhi: Pearson Education.
- Rice. F. P. (1998). Human Development: A lifespan approach. New Jersey: Prentice
- Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata McGraw- Hill. <http://www.mim.ac.mw/books/John%20W.%20Santrock%20-%20Life-span%20Development%2013th%20Edition.pdf>
- Singh, A. (Ed). 2015. Foundations of Human Development: A life span approach. New Delhi: Orient BlackSwan.
- <https://tnou.ac.in/wp-content/uploads/2021/06/SED-11-Human-Growth-and-Development-English.pdf>
- Craig, Dunn, 2010. Understanding Human Development second edition. <https://www.scribd.com/document/471781703/Understanding-human-development-2nd-ed-pdf>
- <https://ncert.nic.in/textbook/pdf/kepy104.pdf>

### Learning Outcome of the Course –

- Understanding of the biological, psychological, social and cultural influences of lifespan human development.
- Understanding of how gender, ethnicity, class, historical periods and social setup relate to the life span experience.
- Understand and work effectively with a diversity of individuals and communities.

**SEMESTER – II**

**CORE COURSE V – HSC-52P 110**

**Practical Credit -2**

**HSC-52P 110- Foundation of Human Development**

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 30 Practicals (2 hours each)

1. Syllabus –

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1. Plan and develop activities to facilitate development in different domains
2. Use of secondary sources to understand the depiction of children
3. Observe and Assess Indian Infants (APGAR Scale and Reflexes)
4. Visit and present experience of observation at Maternal Hospital, Schools (Nursery, Crèche, Anganwadi,)
5. Prepare and present effective Teaching learning material (AV, Electronic, and Print) on different aspects of Human Development.

2. Scheme of Examination –

- Practical exam (total 50 marks)
- Internal and record: 10 marks
- Planning of one activities with TLM: 20 marks
- Minor excise (Any 2) 20 marks
  - i. APGAR Scale
  - ii. Reflexes
  - iii. Report of visits
  - iv. secondary sources to understand the depiction of children

3. Suggested books and reference including links to e-resources –

- Berk, L. E. (2007). Development through the lifespan. Delhi: Pearson Education.
- Santrock, J. W. (2007). A topical approach to life-span development. New Delhi: Tata. a. McGraw- Hill.
- <https://seciss.facmed.unam.mx/wp-content/uploads/2021/02/Cloherly-and-Starks-Manual-of-Neonatal-Care-2021-.pdf>
- <https://dl.uswr.ac.ir/bitstream/Hannan/140636/1/9781405178747.pdf>
- <https://tnou.ac.in/wp-content/uploads/2021/06/SED-11-Human-Growth-and-Development-English.pdf>

Learning Outcome of the Course –

- The students will be able to understand about different development Domains during life span with characteristics.
- The students will be capable to deal with age related challenges and its solutions.
- The students will be cable of better intra and inter personal relationship.

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**SEMESTER – II**  
**CORE COURSE VI**

Code of the Course	Title of the Course	Level of Course	Credits of course
HSC-52T 111	Fundamentals of Textiles	5	4
HSC-52P 112	Fundamentals of Textiles	5	2
Type of Course		Delivery Type of the Course	
Major/Minor		Theory- Lecture, Sixty Lecture including diagnostic and formative assessments - during lecture hours	

**Practical- Laboratory work and field visits.**

<b>Prerequisites</b>	Central Board of Secondary Education or equivalent.
<b>Objectives of the Course (Theory)</b>	<ul style="list-style-type: none"> <li>To impart the knowledge of textiles fibers and yarns in terms of their production, properties and application.</li> <li>To equip the students with an in-depth information regarding the various fabric Construction.</li> <li>To provide comprehensive knowledge about the concepts of dyeing, printing and finishing of textiles.</li> <li>To impart basic pattern making knowledge.</li> </ul>
<b>Objectives of the Course (Practical)</b>	<ul style="list-style-type: none"> <li>To understand physical aspects of fiber, yarn and fabric</li> <li>To learn various techniques of tie and dye</li> <li>To learn basic sewing processes of clothing</li> <li>To learn drafting of basic child's block and adapt to Frock</li> </ul>

**Theory Credit -4****60 Hours****HSC-52T 111- Fundamentals of Textiles****Syllabus –****Max. Marks: 20 + 80 marks****Min. Pass Marks: 8+ 32 marks****Unit 1 Textile fibres and their properties****16**

- Primary and secondary properties of textile fibres with reference to their effect on fibre characteristics
- Molecular structure of fibres
- Classification of fibres
- Origin, production and properties of various fibres: Natural-cotton, linen, wool, silk. Man-made-rayon, polyester, polyamide (nylon 6,6) acrylics, elastomeric fibres
- Basic principle of yarn making: Mechanical spinning (cotton system, wool system, worsted system), Chemical spinning (wet, dry and melt)
- Types of yarns: Staple, Filament, Simple, complex
- Properties of yarns: Yarn numbering systems and twist

**Unit 2 Fabric construction****14**

- Weaving: Parts and functions of the loom
- Weaves : Classification, construction, characteristics and usage
- Knitting: Classification, construction, characteristics and usage
- Non-woven and felts-construction, properties and usage

**Unit 3 Dyeing and Printing****18****Dyeing**

- Classification and properties of dyes: Natural and Synthetic dyes
- Stages of dyeing – fiber dyeing, yarn dyeing, fabric dyeing and garment dyeing

**Printing**

- Methods of Printing – Block, Screen, Stencil, Roller and Rotary
- Styles of Printing – Direct, Discharge and Resist

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- Definition and importance of finishing
- Classification of finishes
- Preparatory Process – Desizing, Scouring, Bleaching, Tentering
- Mechanical finishes – Sizing, Singeing, Mercerization, Napping, Embossing, Calendaring.
- Functional finishes – Wrinkle resistant, Water- resistant and repellent, Flame Retardant, Soil Repellent, Mothproof and Anti-static.

**Suggested books and reference including links to e-resources –**

- Corbman, P.B., (1985) Textiles- Fiber to Fabric (6th Edition), Gregg Division/McGraw Hill Book Co., US.
- Joseph, M.L., (1988) Essentials of Textiles (6th Edition), Holt, Rinehart and Winston Inc., Florida.
- Sekhri S., (2013) Textbook of Fabric Science: Fundamentals to Finishing, PHI Learning, Delhi.
- Tortora, G. Phyllis, Understanding Textiles, McMillan Co. USA.
- Vilensky G., (1983) Textile Science, CBS Publishers and Distributors, Delhi.
- Liechty, E.G., Potterberg, D.N., Rasband, J.A., 2010, Fitting and Pattern Alteration: A Multimethod Approach, Fairchild Publications, New York.
- Zarapkar K.R, System of Cutting, Navneet Publications, India, 2005.
- Amaden Gwford, Fairchild Fashion Draping, Connje publication, Inc 2005.
- Hilary Campbell, Designing Patterns, Om Book services, New Delhi, 2003.
- Helen Joseph-Pattern Making for Fashion Design, Armstrong Pearson Education, Delhi, 2000.
- Sandra Betzina, Fast Fit, the Taunton press, Inc New York London, 2003.
- <https://www.fitnyc.edu/library/>
- [www.textileschool.com](http://www.textileschool.com)
- [www.textilelearner.net](http://www.textilelearner.net)

**Learning Outcome of the Course –**

- Describe textile fibres in terms of their production and properties.
- Understand various production techniques and properties of yarns.
- Develop understanding about fabrics, production techniques, properties and uses.
- Understand the basic dyeing, printing and finishing techniques.
- Able to understand pattern making.

**SEMESTER – II**

**CORE COURSE VI – HSC-52P 112**

Practical Credit -2

HSC-52P 112- Fundamentals of Textiles

1. Syllabus –

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- 1) Fibre Identification tests – Visual, burning, microscopic and chemical. 14
- 2) Yarn Identification – Single, ply, cord, textured, elastic, monofilament, multifilament and spun yarn.
- 3) Fabric Analysis: Thread count and balance.
- 4) Dimensional stability.
- 5) Crease Recovery
- 6) Colour fastness
- 7) Weaves- Identification of plain, twill and satin
- 8) Tie and Dye: Different methods.
- 9) Basic Garment Construction techniques.
- 10) **Development of any two products using above techniques:** 10
  - Table linens (table cloth, mats and napkins)
  - Furnishings (Curtains, cushion covers, diwan set)
  - Wall pieces
  - Scarves, Dupattas
  - Blouse pieces
  - Bags
  - Purses

#### 11 Preparation of scrap book showing

6

- Fibers
- Yarns
- Fabric construction methods
- Technical textiles
- Dyed & printed textiles

#### 2. Suggested books and reference including links to e-resources –

- Chanchal, Arora, C., Chopra, S. and Rastogi, D., *Textile science: a practical manual*, Elite Publishing House Pvt Ltd.
- Mary Mathews, *Practical Clothing Construction, Part- II. Designing, Drafting and Tailoring-* Bhattarams Reprographics (P) Ltd., Chennai, 1991.
- <https://egyankosh.ac.in/handle/123456789/16758>
- [www.elearning.nift.ac.in](http://www.elearning.nift.ac.in)
- [www.textileassociationindia.org](http://www.textileassociationindia.org)
- [www.textilelearner.net](http://www.textilelearner.net)

#### Learning Outcome of the Course –

- The students will be able to identify various properties of fiber, yarn and fabric
- Students will be able to do surface ornamentation by tie and dye method
- They will be able to develop skill in basic stitching processes and in construction of A line frock

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#### Scheme of Examination-

Three Year Bachelor Degree (Level 5 to 7) with Exit Policy involving Certificate after one year (Level 5), Diploma after two Years (Level 5 & 6) (BSc Home Science)

The three year course will have six semesters beginning at level 5 (Semester I and II) for certificate course, level 6 (Semester I to IV) for Diploma and level 7 (Semester I to VI). Each level will have 40 credits each, and to attain a Bachelor degree 120 credits have to be earned.

The number of papers and the maximum marks for each paper together with the maximum marks required for a pass course are shown in the scheme of examination against each subject separately. It will be necessary for a candidate to pass in theory as well as practical part of a subject paper, wherever prescribed, separately.

**1 credit = 25 marks for examination/evaluation**

Continuous assessment, in which sessional work and the terminal examination will contribute to the final grade. Each course in Semester Grade Point Average (SGPA) has two components- Continuous assessment (20% weightage) and (End of Semester Examination) EOSE (80% weightage).

- 1. Sessional work will consist of class tests, mid-semester examination(s), homework assignments, etc., as determined by the faculty in charge of the courses of study.
- 2. Each Paper of EOSE shall carry 80% of the total marks of the course/subject. The EOSE will be of 3 hours duration.
  - Part-A of the paper shall have multiple questions of equal marks. This first question shall be based on knowledge, understanding and applications of the topics/texts covered in the syllabus.
  - Part B of the paper shall consist of 4 questions with an internal choice of each. The four questions will be set with one from each of the units with internal choice. Third to fourth questions shall be based on applications of the topics/texts covered in the syllabus (60% weightage) and shall involve solving Problems (40% weightage) if applicable.
- 3. 75% Attendance is mandatory for appearing in EOSE.
- 4. To appear in the EOSE examination of a course/subject student must appear in the mid-semester examination and obtain at least a C grade in the course/subject.
- 5. Credit points in a Course/Subject will be assigned only if, the student obtains at least a C grade in midterm and EOSE examination of a Course/Subject.

**Contact Hours -**

**15 Weeks per Semester**

L-Lecture	(1 Credit = 1 Hour/Week)
T-Tutorial	(1 Credit = 1 Hour/Week)
S-Seminar	(1 Credit = 2 Hours/Week)
P-Practical/Practicum	(1 Credit = 2 Hours/Week)
F-Field Practice/Projects	(1 Credit 2 Hours/Week)
SA - Studio Activities	(1 Credit = 2 Hours/Week)
1- Internship	(1 Credit = 2 Hours/Week)
C-Community Engagement and Service	(1 Credit = 2 Hours/Week)

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## Exit and Entrance Policy

1. Students who opt to exit after completion of the first year and have secured 48 credits will be awarded a UG Certificate if, in addition, they complete one internship of 4 credits during the summer vacation of the first year. These students are allowed to re-enter the degree programme within three years and complete the degree programme within the stipulated maximum period of seven years.
2. Students who opt to exit after completion of the second year and have secured 96 credits will be awarded the UG diploma if, in addition, they complete one internship of 4 credits during the summer vacation of the second year. These students are allowed to re-enter within a period of three years and complete the degree programme within the maximum period of seven years.
3. Students who wish to undergo a 3-year UG programme will be awarded UG Degree in the Major discipline after successful completion of three years, securing 150 credits and satisfying the minimum credit requirement.
4. A four-year UG Honours degree in the major discipline will be awarded to those who complete a four-year degree programme with 200 credits and have satisfied the minimum credit requirements.
5. Students who secure 75% marks and above in the first six semesters and wish to undertake research at the undergraduate level can choose a research stream in the fourth year. They should do a research project or dissertation under the guidance of a faculty member of the University/College. The research project/dissertation will be in the major discipline. The students who secure 200 credits, including 12 credits from a research project/dissertation, are awarded UG Degree (Honours with Research).

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