

**SARDAR PATEL UNIVERSITY, VALLABH VIDYANAGAR**

**B.Sc. Home Science**

**(Under Choice Based Credit Scheme)**

**Semester - FIFTH (FAMILY RESOURCE MANAGEMENT) YEAR 2023-2024**

Course Type	Course Code	Name of Course	Theory (T) Practical (P)	Credit	Contact hrs/ week	Exam Duration in hrs	Marks		
							Internal	External	Total
<b>Ability Enhancement Course</b>	UH05AHSC51	Programme for Rural and Urban Development	T	2	2	2	15/5	35/14	50/20
<b>Core Courses</b>	UH05CFRM51	Housekeeping	T	4	4	3	30/10	70/28	100/40
	UH05CFRM52	Housekeeping	P	2	4	3	15/5	35/14	50/20
	UH05CFRM53	Building Structure& Materials	T	4	4	3	30/10	70/28	100/40
	UH05CFRM54	Building Structure& Materials	P	2	4	3	15/5	35/14	50/20
	UH05CFRM55	Ergonomics and Design	T	4	4	3	30/10	70/28	100/40
<b>Skill Enhancement Courses</b>	UH05SFRM51	Computer Aided Interior Designing - II	P	2	4	3	15/5	35/14	50/20
	UH05SFRM52	Ergonomics and Design	P	2	4	3	15/5	35/14	50/20
<b>Elective Courses (Any One)</b>	UH05EHSC51	Consumerism	T	2	2	2	15/5	35/14	50/20
	UH05EHSC52	NGO Management	T	2	2	2	15/5	35/14	50/20
	UH05EHSC53	Accessories & Adornment	T	2	2	2	15/5	35/14	50/20
	UH05EHSC54	Food Adulteration	T	2	2	2	15/5	35/14	50/20
	UH05EHSC55	Basics of Research	T	2	2	2	15/5	35/14	50/20
		<b>Total</b>		<b>24</b>	<b>32</b>		<b>180</b>	<b>420</b>	<b>600</b>



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**Vallabh Vidyanagar, Gujarat**  
**(Reaccredited with 'A' Grade by NAAC (CGPA 3.25)**  
**Syllabus with effect from the Academic Year 2023-2024**

Bachelor of Science - Home Science  
(B.Sc. - H. Sc.) (Home Science) Semester (V)

Course Code	UH05AHSC51	Title of the Course	Programmes for Rural and Urban Development
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. To develop understanding regarding the nation towards urban and rural development</li><li>2. To examine the cumulative impact of these developmental efforts in quantitative and qualitative dimensions</li></ol>
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Course Content		
Unit	Description	Weightage*(%)
1.	<ol style="list-style-type: none"><li>a. Introduction to Rural and Urban Development Programmes.</li><li>b. Role of Home Science in rural and urban development.</li><li>c. Five year plan and their focus, brief on Niti Ayog</li></ol>	20
2.	<ol style="list-style-type: none"><li>a. Thrust of agriculture</li><li>b. National food production programmes</li><li>c. National health mission ( NRHM, NUHM, NRLM)</li></ol>	20
3.	Poverty alleviation efforts: <ol style="list-style-type: none"><li>a. Rural and Urban communities, characteristics, nature, difference, village organization, rural and urban development(NGOs working), role of CAPART</li><li>b. Programmes for poverty alleviation for rural and urban areas, employment generation and social inputs.</li><li>c. Current programmes for rural and urban poor,</li></ol>	30
4.	Programmes for women and children: <ol style="list-style-type: none"><li>a. Women as target groups, Specific measures for women and children such as DWCRA, ICDS, IMY, ANARDE, SEWA, CHETNA, TF, SGSY, ARSP.</li><li>b. Current programmes for women as initiated and implemented by the different ministries and departments.</li></ol>	30

Teaching-Learning Methodology	Class Discussions/ Demonstrations, Power point presentations, Class activities/ assignments, group discussions, Field visits, chalk and board
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	The students can get the knowledge of different five years plan.
2.	They use the knowledge in self empowerment and indirectly help the society in poverty alleviation.

Suggested References:	
Sr. No.	References
1.	Upadhyay, H.C. (1991): Modernization and Rural Development New Delhi, Anmol publications
2.	National institute of Rural development, Hyderabad, 1991. Rural development statistics NIRD
3.	Narayan Manohar S (1989) Integrated Rural energy programmes, Delhi Shree Hari printers.
4.	Ghosh Bahanisikha (1990) The Indian population problem, Madras, Sage publications.
5.	Thingalaya N. K (1986) Rural India-Real India, Bombay, Himalaya Publishing House.
6.	Journal of Social welfare, Journal of Rural development ,Journal of Yojana, Journal of Family welfare, Journal of extension education

On-line resources to be used if available as reference material
On-line Resources
<a href="http://egyankosh.ac.in/">http://egyankosh.ac.in/</a>

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Bachelor of Science - Home Science  
(B.Sc.- H. Sc.) (Family Resource Management) Semester (V)

Course Code	UH05CFRM51	Title of the Course	Housekeeping
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. To make the students aware of different areas and functions of housekeeping department.</li><li>2. To familiarize students with housekeeping activities.</li><li>3. To acquaint them with linen handling and laundry procedure.</li><li>4. To enhance students with professional skills in hospitality institutes</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	(a) Introduction and importance of hospitality industry: Types of institutions offering hospitality services, Departments of a hotel, Role of housekeeping department in hospitality industry. (b) Housekeeping Department: Functions, Organization and Layout, Co-ordination with other departments, Competencies of housekeeping personnel, Job description and job specification of housekeeping staff, Record keeping.	20
2.	Cleaning (a) Cleaning agents and equipment. (b) Cleaning procedures: cleaning methods, types of cleaning-, Cleaning guest room & public area (c) Cleaning and care of different surfaces. (d) Pest Control	20
3	Linen and uniform room (a) Layout and physical features. (b) Types of linen, uniforms and their selection. (c) Storage of linens (d) Stock determination, control and distribution. (e) Recycling of condemned linens.	20



4	Laundry (a) Types of laundry systems: in house, contracted outa (b) Layout and physical features of laundry (c) Laundry equipment and laundry agents (d) Laundry procedure. (e) Stain removal (f) Valet service and care labels	20
5	Safety and security in housekeeping (a) Occupational hazards. (b) Housekeeper's responsibilities towards safety (c) Fire prevention and fire fighting (d) First Aid. for commonly occurring health problems (e) Keys and their control (f) Guest and employee theft (g) Dealing with emergencies	10
6.	Eco practices in Housekeeping Department: (a) Eco friendly practices for rooms, (b) Green building, (c) Energy audit: Lighting, Laundry, Water management, Ecotel, Environment friendly cleaning agents.	10

Teaching- Learning Methodology	Lectures, Power -point Presentations, Field Visits, ICT enabled learning, Group Discussions, e learning through videos
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%



Course Outcomes: Having completed this course, the learner will be able to

1.	Know working procedures of housekeeping department of a hotel
2.	Demonstrate operations management in cleaning and safety systems.
3.	Appreciate the need for maintenance of facilities and services.
4.	Demonstrate the working of laundry equipment.
5.	Develop competence for professional practice in housekeeping.

Suggested References:

Sr. No.	References
1.	Andrews, S. (2008). <i>Hotel Housekeeping Management and Operations</i> . New Delhi: Tata McGraw Hill Education Pvt. Ltd.
2.	Raghubalan, G., and Raghubalan, S. (2007). <i>Hotel Housekeeping Operations and Management</i> . New Delhi: Oxford University Press.
3.	Andrews, S. (1980). <i>Housekeeping Training Manual</i> . New Delhi: Tata Mc Graw Hill Pub Co Ltd.

On-line resources to be used if available as reference material

On-line Resources

<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827>  
P-04. Front Office and Housekeeping ( M-18-39)

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Bachelor of Science - Home Science  
(B.Sc.- H. Sc.) (Family Resource Management) Semester (V)

Course Code	UH05CFRM52	Title of the Course	Practical - Housekeeping
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. To understand the importance of care and maintenance of cleaning equipment used in housekeeping department.</li><li>2. To understand the importance and role of the housekeeping control desk.</li><li>3. To acquaint them with the standard contents of guestrooms.</li><li>4. To comprehend different types of linen.</li><li>5. To know uses of laundry agents, stain removal, dry cleaning.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Layout of housekeeping department and responsibilities of housekeeping staff.	05
2.	Method of cleaning room and bathroom. Method of bed making Method of setting maid's cart Process of preparing Room inspection check list.	15
3.	Cleaning & maintenance of various surfaces glass articles, silver, brass, copper, sink stainless steel	10
4.	Methods of removing stains from various linens and uniforms. Method of laundering cotton, woollen, silk and synthetic garments Method of starching linens and uniforms	10
5.	Draw layout of linen room and explain activities of linen room.	10
6.	Visit to various hospitality institutes to explore  (a) Organization (b) Job description and job specification of housekeeping staff (c) Maintenance of registers (d) Safety aspects	10



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7.	Draw organization structure of small medium and large hotel.	10
8.	To know various registers and files maintained by housekeeping department.	10
9.	Prepare-First aid box.	10
10.	Understanding the felt/ unfelt needs of the customers with special needs like physically handicap, pregnant, lactating, elderly, children	10

Teaching-Learning Methodology	Power -point Presentations, blackboard and chalk, Field Visits, actual performance of practical, e learning through videos of working of housekeeping department, presentations.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand various cleaning procedures followed in the housekeeping department.
2.	Understand the basic functions of cleaning equipment and its methods of operation.
3.	Know the different systems adopted and practices by the housekeeper for the efficient functioning of the hotel.
4.	Apply various aspects of the linen room planning, layout, location and activities.
5.	Demonstrate appropriate skills in housekeeping activities.





Suggested References:

Sr. No.	References
1.	Andrews, S. (2008). <i>Hotel Housekeeping Management and Operation</i> . New Delhi: Tata McGraw Hill Education Pvt. Ltd.
2.	Raghubalan, G., and Raghubalan, S. (2007). <i>Hotel Housekeeping Operations and management</i> . New Delhi: Oxford University Press.
3.	Andrews, S. (1980). <i>Housekeeping Training Manual</i> . New Delhi: Tata Mc Graw Hill Pub Co Ltd.

On-line resources to be used if available as reference material

On-line Resources

<https://epgp.inflibnet.ac.in/Home/ViewSubject?catid=827>  
P-04. Front Office and Housekeeping ( M-18-39)

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Bachelor of Science - Home Science  
(B.Sc.- H.Sc.) (Family Resource Management) Semester (V)

Course Code	UH05CFRM53	Title of the Course	Building Structure And Materials
Total Credits of the Course	04	Hours per Week	04
Course Objectives:	1. To familiarize them with exterior and interior features of the house. 2. To explain the domestic services essential for a building. 3. To give an insight for the recent trends in construction materials and finishes.		

Course Content		
Unit	Description	Weightage* (%)
1.	Building components	05
2.	Exterior Construction features (a) Foundation: Deep & Shallow. (b) Roof: Pitched & flat. (c) Wall: Load bearing & non load bearing	20
3.	Interior Construction features of house (a) Stairways : terms and types (b) Doors and Windows : location, terms ,types (c) Floors: construction , material	20
4.	Construction Materials (a) Structural material: Brick, Cement, Plaster, Mortar, Concrete, R.C.C, Stone, metal, prefabricated material. (b) Finishing Materials: Paints, Wall Paper, Glazed tiles, Wood, plastic	20
5.	Domestic services in building (a) Water Supply. (b) Drainage. (c) Electricity	20
6.	Recent advances in building materials and finishes (a) Construction materials, interior finishes and exterior finishes, partition materials. (b) Approximate cost of building materials and finishes. (c) Concept of green building materials.	15



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Teaching-Learning Methodology	Power point presentations, Field visits, Assignments, Quiz, Participatory lectures, Discussions and display of various building materials, lectures, tutorials, library use and e-learning through videos of various building materials coupled with market survey.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Identify various materials used in the construction of the building.
2.	Know various structural features and types of latest trends in a building.
3.	Determine the materials best suited for a particular building

Suggested References:	
Sr.No.	References
1.	Agan, M.S.(1970). <i>The house its plan and use</i> . New Delhi: Oxford & IBH pub.Co.
2.	Bindra, S.P. & Arora,S. P.(2003). <i>Building Construction</i> . New Delhi: Dhanpat Rai Pub.
3.	Deshpande, R.S. (1978). <i>Modern ideal homes for Indians</i> . New Delhi: United Book Corp.
4.	Arora, S.P. & Bindra, S.P. (2013). <i>A Text book of Building Construction</i> . New Delhi: Dhanpat Rai Publications.

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Bachelor of Science - Home Science  
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Course Code	UH05CFRM54	Title of the Course	Practical - Building Structure and Materials
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. Gain knowledge on concepts, types and use of building materials and selection tactics</li><li>2. Learn use of materials at different levels or stages of a building construction and finishes in buildings</li><li>3. Appraise usage and characteristics of building materials and finishes for strength, durability and aesthetics.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Collection and identification of various building materials use in house construction.	05
2.	Drawing a floor plan of selected house along with furniture arrangement on the given scale	10
3.	Draw landscape plan and decide color scheme	10
4.	Introduction to concept of model making and various materials and tools used for model making	05
5.	Preparation of base for models using wood or boards: Introduction to block models of buildings (or 3D Compositions) involving the usage of various materials like Thermocol, Soap/Wax, Boards, Clay Flex etc.	10
6.	Scaled models of furniture of various rooms	10
7.	Developing building models - showing details on exterior components – Windows/Glazing/treatment, Doors, Sunshades, Wall Panel, Roof	10
8.	Creating models showing interior of house with furniture and interior components.	30
9.	Various site elements – Contour representation, Roads/Pavements, Trees/Shrubs, Lawn, Water bodies, Street furniture, Fencing etc.	05
10.	Visits to various construction sites.	05



Teaching-Learning Methodology	Power point presentations, Videos, Field visits, Assignments, Discussions and display of various building materials, tutorials, library use and e-learning through videos of various building materials coupled with market survey ,field-based learning
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Comprehend the techniques of model making
2.	Determine scale model requirements
3.	Benefit from the hands-on experience gained for future career prospects
4.	Appraise/ compare feasibility of different materials for making models

Suggested References:	
Sr. No.	References
1.	Leger, E. (2003). <i>Complete Building Construction</i> . London: Wiley-dreamtech India Pvt Ltd.
2.	Curl, J.S. (2006). <i>A Dictionary of Architecture and Landscape Architecture</i> . London: Oxford University Press.
3.	Faulkner, R., and Faulkner, S. (1986) <i>Inside Today's Home</i> . New York: Rinehart publishing Co.

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Bachelor of Science - Home Science  
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Course Code	UH05CFRM55	Title of the Course	Ergonomics and Design
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. To familiarize with the intricacies of ergonomics with increase in efficiency and improved health.</li><li>2. Build knowledge on human interaction with task and technology in day today life.</li><li>3. To augment the workspace needed for various activities.</li><li>4. To develop aptitude in identifying the product / space design problems at home and at work, using basic design principles.</li><li>5. To understand interface of the human element and the user's perspective in the evolution of product/space design.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Ergonomic concepts (a) Significance and scope of ergonomics: Aims, objectives, Definition and benefits of ergonomics, Role of the ergonomist. (b) Ergonomic components and their interrelationship: Components of worker input (affective, cognitive, temporal and physical), Human characteristics, capabilities and limitations.	10
2.	Body at work (a) Significance of Anatomy and physiology in ergonomics: (b) Work physiology -Body type, Physical fitness - age, BP, HR and BMI, Physiology of Musculoskeletal system, Muscular- Contraction initiation, Tendons, Joints, ligaments. (c) Anthropometry: Meaning, importance, methods of taking measurements, Types of dimensions (structural/ functional, Static/ Dynamic), Techniques of taking Anthropometric measurements.	20
3.	Biomechanics (a) Concept of biomechanics: Work postures- postural variations and discomfort (b) Measurement of physical work capacity: Caloric cost of various activities, factors affecting energy requirement, Methods of measuring human cost of work. (c) Muscular Work: Types and Muscle Contractions/extension/rotation (d) Fatigue: Physiological and Psychological (e) Manual material handling: Pushing, Pulling, Repetitive task, Muscular skeletal disorders	20



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4.	Indices of indoor comfort: (a) Physical Factors of the Work Environment: Lighting (Lighting levels, contrast and glare), Noise (Noise induced hearing loss, Distraction, annoyance and emergency signals), Thermal Environment (Body temperature regulation and acclimatization, thermal comfort and Discomfort), Vibration effects and subjective assessment. (b) Functional design and arrangement of workplaces.	20
5.	Applications of anthropometry in design: (a) Ergonomic principles for good workspace design. (b) Work heights (standing, sitting, Workspaces- Elbow room, Knee room, Clearances, Circulation space in rooms and corridors, Room to grasp and move things) (c) Percentiles, Design for extreme individuals, Design for adjustable range and Design for average.	20
6.	Product Design and Development: (a) Design concept- functionalism and aesthetics. (b) Ergonomic considerations in designing products: Design for standing /seated worker.	10

Teaching-Learning Methodology	PowerPoint presentations, Lectures, Discussions, Project work/ assignments, Games
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Evaluation Pattern		
Sr.No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Distinguish the terms referring to health and safety and ergonomics.
2.	Identify and use ergonomic controls to reduce and prevent work-related disorders.
3.	Comprehend interrelatedness of work, worker and work environment on productivity.
4.	Comprehend interrelatedness of work, worker and work environment on productivity.
5.	Relate significance of anthropometry to workplace designing.



Suggested References:

Sr.No.	References
1.	Grandjean (1973). <i>Ergonomics of the Home</i> . London: Taylor & Frances.
2.	Dubey, D.(2020). <i>Ergonomics</i> . New Delhi: Random publications
2.	Barnes, R.N. (1980). <i>Motion and Time Study, Design and Measurement of Wor.</i> USA: John Willy.
3.	Hudso, W.R (1962). <i>Work place Dimensions and Physiological Cost To The Worker</i> . The Journal of Industrial Engineering.
4.	Chauhan, M.K. (2015). <i>Ergonomics: Practical Manual for Beginners</i> . New Delhi: Authorspress.
5.	Bridger R.S.(2011). <i>Introduction to Ergonomics</i> . New Delhi: Taylor & Frances.
6.	Jhamb L.C.(2008). <i>Work Study and Ergonomics</i> . Pune :
7.	Gandotra V., Oberoi, K.& Sharma, P.(2013). <i>Essentials of Ergonomics</i> . New Delhi:

On-line resources to be used if available as reference material

On-line Resources

<https://www.mayoclinic.org/healthy-lifestyle/adult-health/in-depth/office-ergonomics/>

<http://www.ilocis.org/documents/chpt29e.htm>

[https://www.danmacleod.com/ErgoForYou/10\\_principles\\_of\\_ergonomics.htm](https://www.danmacleod.com/ErgoForYou/10_principles_of_ergonomics.htm)

<https://ehs.unc.edu/workplace-safety/ergonomics/>

<https://www.osha.gov/ergonomics>

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Bachelor of Science - Home Science  
(B.Sc.- H. Sc.) (Family Resource Management) Semester (V)

Course Code	UH05SFRM51	Title of the Course	Practical - Computer Aided Interior Designing - II
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. To make use of Drafting Tool and Isometric drawings for Interiors designing.</li><li>2. Get practically oriented with the 3 D drawing in designing Interior.</li><li>3. Understand the power and precision of computer-aided modelling and drafting</li><li>4. Create 3D objects as plan view, elevations and complex 3D shapes</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Basic 2D Drawing (a) Floor plan (b) Elevation plan	10
2.	Floors (a) Creating Floor slab (b) Modifying floor slab	10
3.	Stairs (a) Designing Stairs (b) Modifying Stairs	10
4.	2D Isometric Drawings (a) Setting Up the Isometric mode (b) An Isometric Plan (c) Drawing an Iso-Circle Isometric Drawing	10
5.	Designing using AutoCAD (a) Furniture (b) Interior related objects	10



6..	3-D Drawing in AutoCAD (a) Introduction to 3D (b) Creating solid primitives (c) Mesh primitives (d) Working in 3D (e) Introduction to free form design	10
8.	Working with the User Coordinate System 3-D Surfaces	10
9.	Solid Model Creation from 2D	05
10	Rendering	05
11.	Project work : 3D plan of a house	20

Teaching- Learning Methodology	Demonstrations, Workshop, , Practical guidance, Power point presentations, actual performance of practical
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Apply and maintain user-defined coordinate systems to aid in the construction of 3D objects.
2.	Create 3D surface models using a variety of techniques
3.	Demonstrate dimensioning concepts and techniques in 3D presentation



Suggested References:

Sr. No.	References
1.	Hamad, M. (2018). <i>AutoCAD 2019 Beginning and Intermediate</i> . US: Stylaw Publishing LLC.
2.	Gindis, E. J., and Kaebisch, R.C. (2017). <i>Up and Running with Auto CAD 2018: 2D Drafting and Design</i> . Cambridge: Academic Press.

On-line resources to be used if available as reference material

On-line Resources

[https://www.youtube.com/watch?v=2c5mLCPeMh8&ab\\_channel=CADCAMTutorials](https://www.youtube.com/watch?v=2c5mLCPeMh8&ab_channel=CADCAMTutorials)

<https://images-na.ssl-images-amazon.com/images/I/C1BxaOC0-IS.pdf>

<https://www.thesourcecad.com/autocad-tutorials/>

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Bachelor of Science - Home Science  
(B.Sc.- H.Sc.) (Family Resource Management) Semester (V)

Course Code	UH05SFRM52	Title of the Course	Practical - Ergonomics and Design
Total Credits of the Course	02	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"><li>1. To provide insight into professional practice in design development.</li><li>2. To be able to design workspace efficiently for self and others.</li><li>3. To learn various ergonomic methods with real time applications in career.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Study of various ergonomic tools & instruments	10
2.	(a) Measurement of various human biological aspects: Body Temperature, Blood pressure, Heart rate, BMI (b) Analysing the various human body type w.r.t WHR	10
3.	Analysing various posture at work through OWAS / REBA / FLEXI curve	10
4.	Assessing physiological workload through various parameters.	10
5.	Assessing the type of work and its cost on worker with respect to heart rate using: Tread mill, Ergo bicycle, Step stool, Body mapping technique	10
6.	Assessing environment parameters: Light, Noise, Heat and Vibration.	10
7.	Anthropometric measurements: Sitting (Static and dynamic), Standing (static and dynamic), Calculating percentiles	10
8.	Designing work station for self: Table, chair; Kitchen; Storage (wardrobe)	15
9.	Designing for group working with percentiles: Table, chair; Kitchen; Storage (wardrobe)	15



Teaching-Learning Methodology	Demonstrations, first-hand experience by using available equipment, Field Visits, Drawing
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written / Practical Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Practical, Viva-voce, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Practice in design development.
2.	Design various workspaces efficiently for self and others.
3.	Learn various ergonomic methods with real time applications in career
4.	Effective use of energy and time at home and work places.
5.	Work efficiently while maintaining health and wellbeing.

Suggested References:	
Sr. No.	References
1.	Grandjean (1973). <i>Ergonomics of the Home</i> , London: Taylor & Frances.
2.	Barnes, R.N. (1980). <i>Motion and Time Study, Design and Measurement of Work</i> . USA: John Willy.

On-line resources to be used if available as reference material
On-line Resources
<a href="http://www.ilocis.org/documents/chpt29e.htm">http://www.ilocis.org/documents/chpt29e.htm</a>
<a href="https://ehs.unc.edu/workplace-safety/ergonomics/">https://ehs.unc.edu/workplace-safety/ergonomics/</a>

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Bachelor of Science - Home Science  
(B.Sc.- H.Sc.) (Home Science) Semester (V)

Course Code	UH05EHSC51	Title of the Course	Consumerism
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. To make them understand the role of consumer in the market.</li><li>2. To increase their awareness about consumer buying behaviour, their rights and responsibilities.</li><li>3. To familiarize them with various consumer problems.</li><li>4. To enhance their knowledge base about redressal agencies.</li></ol>
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Course Content		
Unit	Description	Weightage * (%)
1.	Consumer and consumer problems (a) Definition of a consumer. (b) Problems of consumer (including services as water, gas, electricity etc.) (c) Unfair consumer practices: adulteration and faulty weights and measures	25
2.	Consumer Buying Behaviour (a) Factors influencing buying behaviour (b) Consumer aids: classification – Labels, Trademarks, Brand Names, Patents, Warranty, Guarantee, Quality Control and After Sales Service (c) Advertisement features, importance, media, usefulness	25
3.	Consumer protection (a) Meaning, characteristics and objectives (b) Need and ways for providing consumer education (c) Consumer rights and responsibilities (d) Consumer Laws	25
4.	Consumer protection agencies (a) Consumer organizations – origin, functioning, role and types (b) Consumer cooperatives – role, history and growth in India (c) Consumer redress: role of consumer forums and consumer courts in safeguarding consumers	25

Teaching-Learning Methodology	Lectures, active learning, reflective learning, written exercises, collaborative learning, problem solving, case studies, ICT enabled learning
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Emerge as informed consumers
2.	Becoming familiarized to the changing trends in consumerism
3.	It also provides an understanding of the procedure of redress of consumer complaints, and the role of different agencies in establishing product and service standards

Suggested References:	
Sr. No.	References
1.	Misra S., Sree Kumaran G. N., and Chadah, S. (2015). <i>Consumer Handbook</i> . New Delhi: Department of Consumer Affairs.
2.	Singh, G. (1990). <i>Law of Consumer Protection</i> . Jaipur: Bharat law publishers.
3.	Agarwal, A. (1989). <i>A practical handbook for consumers</i> . Bombay: India book house.
4.	Sarkar, A.(1989). <i>Problems of Consumers in Modern India</i> . New Delhi: Discovery publishing House.
5.	<i>Recent issues of magazines: Insight</i> , Ahmedabad : CERC.
6.	<i>Consumer Voice</i> :New Delhi: VOICE Society.



On-line resources to be used if available as reference material

On-line Resources

Consumer handbook English [https://consumeraffairs.nic.in/sites/default/files/file-uploads/consumer\\_information/Consumer\\_Handbook\\_H.pdf](https://consumeraffairs.nic.in/sites/default/files/file-uploads/consumer_information/Consumer_Handbook_H.pdf)

Consumer handbook Hindi [https://consumeraffairs.nic.in/sites/default/files/file-uploads/consumer\\_information/Consumer\\_Handbook.pdf](https://consumeraffairs.nic.in/sites/default/files/file-uploads/consumer_information/Consumer_Handbook.pdf)

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Bachelor of Science - Home Science  
(B.Sc.- H.Sc) (Home Science) Semester (V)

Course Code	UH05EHSC52	Title of the Course	NGO Management
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Acquaint students regarding Non-Government Organizations (NGO).</li><li>2. Acquaint them about the steps of starting the NGO.</li><li>3. Enable the students to manage the NGO consequently, which enhance the employability.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	<p>Concept of NGO</p> <ol style="list-style-type: none"><li>(a) Meaning of NGO and GO</li><li>(b) Difference between Government Organization and NGO</li><li>(c) Characteristics of good NGO</li><li>(d) Structure of NGO</li><li>(e) Functions of NGO</li><li>(f) Advantages of NGO</li><li>(g) Present status of NGO</li><li>(h) Contribution of NGO in the development</li></ol>	25
2.	<p>Legal Frame Work for Establishing NGO</p> <ol style="list-style-type: none"><li>(a) Steps for starting NGO</li><li>(b) Registration of NGO</li><li>(c) Identifying Funding agencies</li><li>(d) Resource Mobilization</li><li>(e) Methods and Techniques of fund raising</li><li>(f) Foreign contributions and Regulation Act (FCRA)</li><li>(g) Statutory obligations, Income Tax Exemption (80-G, 12-A and 35 NC)</li></ol>	25
3.	<p>NGO Management</p> <ol style="list-style-type: none"><li>(a) Managing people and teams in NGOs</li><li>(b) NGO Management competencies</li><li>(c) Applying NGO principles and values</li></ol> <p>Policies and Programmes</p> <ol style="list-style-type: none"><li>(a) New regulations for NGO and government control</li><li>(b) Government laws, partnership model, Governing Schemes through ministries /Department / Bodies, government grant-in-aid</li></ol>	25



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4.	Problems of NGO (a) Training (b) Recruitment (c) Funding (d) Resource Mobilization (e) Documentation	25
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Teaching- Learning Methodology	Lecture method ,Active learning methodology , Group discussions Method, Power Point Presentation , Audio Visual methods, Seminar, Assignment, Quiz, Field visit, debates
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Know the concept of NGO and present status of NGO.
2.	Manage NGO & required resource mobilization.
3.	Enhance employability in NGO.

Suggested References:	
Sr. No.	References
1.	Abraham A. <i>Formation and Management of NGOs</i> (2003). New Delhi: Third Edition, Published by Univarsal Law publishing Co. Pvt Ltd.
2.	Clark J. (1991). <i>Voluntary Organizations: Their Contribution to Development</i> . London: Earth Scan



3.	Lewis D. <i>Management of Non Governmental Development Organization</i> (2001). Newyork: Second Edition, Published by Routledge.
4.	Dorothea H. (2003). <i>the real world of NGO's, Discourses, Diversity and Development</i> . New Delhi: Zed books Ltd.
5.	Jain R.B. (1995). <i>NGO's in Development Perspective</i> . New Delhi: Vivek Prakasan.
6.	Joel, S.G.R., and Bhose. (2003). <i>NGO's and Rural Development – Theory and Practice</i> . New Delhi: Concept Publishing Company.
7.	John M. R. (2002). <i>Stakeholders in Rural Development – Critical Collaboration in State – NGO Partnerships</i> . New Delhi: Sage Publications.
8.	Julie F. (2003). <i>Governments, NGO's and the Political Development of the Third World</i> . Jaipur: Rawat Publications.
9.	Julie F. (2003). <i>Non Governments – NGO's and the Political Development of the Third World</i> . New Delhi: Rawat Publications.
10.	Kalyan S. (2013). <i>An Easy Guide to NGO</i> . Kolkata: Book Corporation.
11.	Kumar, A. (2003). <i>Social Change through NGO's</i> . New Delhi: Anmol Publishers.
12.	Kavita K. et al (2010). <i>Status of Child and Welfare Originations</i> , Jaipur: Aaviskar Publishers.
13.	Singh R.S. (2003). <i>Role of NGO's in Developing Countries (Potentials, Constraints and Policies)</i> . New Delhi: Deep & Deep Publications (P) Ltd.
14.	Chandra S. (2003). <i>Guidelines for NGO Management in India</i> . New Delhi: Published by Kanishka Distributors.

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Bachelor of Science – Home Science  
(B.Sc. – H.Sc.) (Home Science) Semester (V)

Course Code	UH05EHSC53	Title of the Course	Accessories and Adornment
Total Credits of the Course	02	Hours per Week	02
Course Objectives:	1. Gain knowledge on importance of accessories & adornments in dress design. 2. Enable students gather knowledge on accessories & adornment used in garments. 3. Make students aware of the materials, styles and placement of accessories and adornments.		

Course Content		
Unit	Description	Weightage* (%)
1.	Importance of adornment and accessories	10
2.	Accessories & adornments during middle age	20
3.	Accessories in modern times: (a) Hats & headgear (b) Jewellery (c) Sash (d) Shoes & boots (e) Muffs & gloves (f) Handbags	30
4.	Adornments: (a) Buttons (b) Lapel pins (c) Laces & ruffles (d) Ribbons (e) Braids (f) Through surface ornamentation (g) Hand & machine embroidery	30
5.	Innovations in adornment & accessories	10

Teaching-Learning Methodology	Lectures, Power -point Presentations, blackboard and chalk, Field Visits, ICT enabled Teaching, market survey, discussions, assignments, Presentations, Individual / group project.
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Appreciate the role of accessories in fashion.
2.	Comprehend the techniques of adornment.
3.	Develop the skill to coordinate adornments & accessories in garments.

Suggested References:	
Sr. No.	References
1.	Dickerson K.G. (2003), <i>Inside the Fashion Business</i> . New Delhi: VII Edition, Person Education Pvt. Ltd., Indian Branch.
2.	Jarnow, Guerreiro, Judelle, (1987), <i>Inside the Fashion Business</i> , New York: IV Edition, Macmillan Publishing Company.
3.	Kumar. A. (2010), <i>Fashion Tourism</i> , New Delhi: Sonali Publication, India.
4.	Makelvey K. (2006), <i>Fashion Source Book</i> , U.S.A.: II Edition, Blackwell Publishing Ltd.
5.	Pundir N., (2007), <i>Fashion Technology- Today &amp; Tomorrow</i> , New Delhi: Mittal Publication, India.
6.	Neelima, (2009), <i>Fashion &amp; Textile Design</i> , New Delhi: Sonali Publications.

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Bachelor of Science -Home Science  
(B.Sc. – H. Sc.) (Home Science) Semester (V)

Course Code	UH05EHSC54	Title of the Course	Food Adulteration
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. Familiarize students with food standards.</li><li>2. Enable testing of different foods for their quality.</li><li>3. Familiarize students with tests used for finding adulterations and quality assessments.</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Food Adulteration – Definition, types.	15
2.	(a) Food Laws Voluntary /Mandatory. Role of National & International Voluntary Agencies and legal aspects of consumer protection. (b) Food Standards.	25
3.	Specifications for the following (a) Milk & milk products (b) Oil and Fats (c) Spices & Condiments (d) Food grains. (e) Flours. (f) Canned Foods (g) Fruits and vegetable products (h) Flesh Foods (i) Sugar & preserves (j) Beverages- alcoholic & non-alcoholic	35
4.	(a) Contaminants, residues & pollutants (b) Conditions for Sale & License	25

Teaching-Learning Methodology	Chalk and board, Power point presentations, Class Discussions, Class activities / assignments, quiz
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Evaluation Pattern		
Sr. No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Conduct adulteration test on a small scale basis, enterprise, and household level will gain knowledge of agencies working for it.

Suggested References:	
Sr. No.	References
1.	ISI Publications on above topics
2.	Association of Official Agricultural Chemists, & Horwitz, W. (1975). <i>Official methods of analysis</i> (Vol. 222). Washington, DC: Association of Official Analytical Chemists.
3.	Raghuramulu, N., Nair, K. M., & Kalyanasundaram, S. (Eds.). (1983). <i>A manual of laboratory techniques</i> . New Delhi: National Institute of Nutrition, Indian Council of Medical Research.

On-line resources to be used if available as reference material
On-line Resources
<a href="http://Egpp.inflibnet.ac.in/Home">Egpp.inflibnet.ac.in/Home</a>

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Bachelor of Science - Home Science  
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Course Code	UH05EHSC55	Title of the Course	Basics of Research
Total Credits of the Course	02	Hours per Week	02

Course Objectives:	<ol style="list-style-type: none"><li>1. To develop understanding of the basic framework of research process.</li><li>2. To develop an understanding of various research designs and techniques.</li><li>3. To identify various sources of information for literature review and data collection.</li><li>4. To develop an understanding of the ethical dimensions of conducting research</li></ol>
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Course Content		
Unit	Description	Weightage* (%)
1.	Introduction to Research (a) Meaning ,purpose, approaches and types of research (b) Identification of problem (c) Collecting review and keywords (d) Research ethics and plagiarism	20
2.	Methods of data collection (a) Primary and Secondary data collection methods (b) Qualitative methods of data collection, (c) Survey methods of data collection (d) Sampling and types of sampling	20
3.	Processing and analysis of data (a) Measures of central Tendency (Mean, medium, Mode), (b) Measures of dispersion (range, mean deviation, standard deviation) (c) Graphical representation of Data.	20
4.	Preparing a small project and report writing ( Title page, Abstract, Introduction, Methodology, Results, Discussion, References, and Appendices)	40

Teaching-Learning Methodology	Lectures, active learning, reflective learning, written exercises, collaborative learning, problem solving, case studies, ICT enabled learning
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Evaluation Pattern		
Sr.No.	Details of the Evaluation	Weightage
1.	Internal Written Examination (As per CBCS R.6.8.3)	15%
2.	Internal Continuous Assessment in the form of Quizzes, Seminars, Assignments, Attendance (As per CBCS R.6.8.3)	15%
3.	University Examination	70%

Course Outcomes: Having completed this course, the learner will be able to	
1.	Understand research terminology
2.	Identify the components of a literature review process
3.	Understand the research methodology
4.	Prepare a scientific report of the given project

Suggested References:	
Sr.No.	References
1.	Bernard, H.R. (2013). <i>Social Research Methods: Qualitative and Quantitative Approaches</i> . New Delhi: Sage publications.
2.	Best and Kahn. (2009). <i>Research Methodology</i> . New Delhi: PHI Learning Private Limited.
3.	Kothari, C.R. (2004). <i>Research Methodology (Methods and Techniques)</i> . New Delhi: New Age Publisher.
4.	Bandarkar, P.L., and Wilkinson, T.S. (2000). <i>Methodology and Techniques of Social Research</i> . Mumbai: Himalaya Publishing House.
5.	Dooley, D. (1995). <i>Strategies for Interpreting Qualitative Data</i> . California: Sage Publications.
6.	Gay, L.R. (1981). <i>Educational Research: Competencies for Analysis and Applications</i> . (2 <sup>nd</sup> ed.) Columbus: Charles E. Merrill Publishing Company and A. Bell and Howell Company.
7.	Ahuja, R.(2010). <i>Research Method</i> . New Delhi: Rawat Publication

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