



Department of Higher Education, Madhya Pradesh

M.H.Sc. (FRM)

(Home Science-Family Resource Management)

As per NEP 2020 Syllabus

Academic Year 2025-26

As per recommendations of NEP 2020 relevant to Postgraduate Education and Based on the UGC guidelines of Curriculum & Credit Framework for Postgraduate Programmes (June 2024) with effect from the session 2025-26

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Department of Higher Education, Madhya Pradesh

Home Science-Family Resource Management

Two Year PG Course 2025-26 Scheme

S. No.	Sem ester	Paper	Title of Paper	Credit (Theory + Practical)	Max - marks	Intern al	External
1	I Sem	1. (Theory)	Consumer Education and Family Finance	6	100	40	60
		Practical		4	100	40	60
		2. (Theory)	Residential space designing & construction.	6	100	40	60
		Practical		4	100	40	60
		3.	Internship/ Apprenticeship/ Seminar	2	100	50	50
2	II Sem	1. (Theory)	Research methodology and Statistics	6	100	40	60
		Practical		4	100	40	60
		2. (Theory)	Applied Ergonomics	6	100	40	60
		Practical		4	100	40	60
			Value Added Course	2			
			Total	22 Credits			

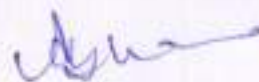
Note: 1. After the completion internship/apprenticeship of student should submit internship/apprenticeship report in hard copy of minimum 5000 words in their respective departments.

2. Student should prepare and submit power point presentation for their final examination.

Students who exit at the end of First year shall be awarded a post-graduate diploma.



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Syllabus

Postgraduate (M.H.Sc. I Sem)

(Family Resource Management)

Consumer Education and Family Finance

Paper-1 (Theory)

Part A- Introduction			
Progra:	Class: M.H.Sc I Sem	Year: First Sem	Session: 2025-26
Subject: Consumer Education and Family Finance			
1	Course Code	Core - 1	
2	Course Title	Consumer Education and Family Finance (Theory)	
3	Course Type (Core Course/Discipline Specific Elective/Elective/Generic Elective/Vocational)	Core	
4	Pre-requisite (if any)	To study this course, a student must have had the subject in one of the following B.H.Sc. Degrees.	
5	Course Learning outcomes (CLO)	On completion of this course, student will be able to gain knowledge about- 1. Significance of family income, Expenditure and saving. 2. Consumer protection act, consumer rights and responsibilities. 3. Budget Preparation. 4. Role of consumer forum. 5. Record keeping and accounting.	
6	Credit Value	6	
7	Total Marks	Max Marks: Max. Theory Marks: 60 Max. CCE Marks: 40 Total Marks: 100	Min. Passing Marks: Min. Passing Theory Marks: 24 CCE - 16 Total - 40

Part B- Content of the Course		
Total No. of Lectures (6 hours/Week)		
Total No. of Lectures 90 hrs		
Unit	Topic	No. of Lectures hrs
I	Consumer Behaviour 1.1 Ancient Consumer Practices 1.2 Consumer- Meaning, Definition, Characteristics. 1.3 Wants- Meaning, Definition, Characteristics, Classification and Factors. 1.4 Models of consumer behaviour. 1.5 Factors affecting consumer buying behaviour- Personal / Psychological/ Social cultural. 1.6 Consumer Decision making. 1.7 Consumer buying habits and motives of purchasing. Activity - Discuss- Plans for purchasing in different income groups.	15
II	Consumer Education 1.1 Consumer Education - Meaning, definition objects and Significance. 1.2 Methods of Consumer Education. 1.3 approach of consumer Education- Economic /environment safety/ Social/ Cultural/ Health/ Legal Issues. 1.4 Source of consumer information- i. Advertisement ii. labels iii. Packages etc. 1.5 Consumer Purchasing Problem. 1.6 identification various marks significance like Hallmark, Wool mark, Silk mark, ISI etc. 1.7 Online Purchasing. Activity - i. Collection of Labels ii. Discussion on online purchasing	15
III	Consumer Protection 1.1 Ancient Roots of Consumer Protection insights from Indian Vedic Era. 1.2 Consumer Protection - meaning and need of consumer protection. 1.3 Consumer rights and responsibility. 1.4 Consumer forum- concept and Role. 1.5 Consumer Problems - Unfair trade practices. Faulty weight and measure, Adulteration. 1.6 Common legislation, Consumer Redressal. 1.7 Consumer Laws - Protection Act 1986 and its role. Activity -Fields trip-Visit to Agencies and report writing.	15
IV	Financial management 1.1 Traditional ancient family financial management, <ul style="list-style-type: none"> • Joint family system • Role of Women • Philosophy/ Banks and credit • Financial Instruments 1.2 Significance, Scope and objectives of Financial management.	15

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	1.3 Strategy of financial management, 7 steps to complete family financial management. Co-ordination, Accountability, Budgeting, Saving, Communication, Planning, Recording. Activity - Prepare self financial report for your own Family,	
V	1.1 Financial planning. 1.2 Family income and household expenditure. 1.3 Budget- meaning definition and importance of budget. 1.4 Factors and characteristics of budget. 1.5 Types of budget and budget items. 1.6 Process of budget making. Activity - prepare a budget for on family,	15
VI	Saving and Investment, Household Accounting 1.1 Household Accounting-types and record keeping. 1.2 Savings and investments-Concept, Meaning and Definition, Importance and Factors. 1.3 Modes of Saving and Investments – <ul style="list-style-type: none"> • Bank- Different schemes. • Post Office Different Schemes, • Insurance Different Schemes, • Other Investment Mode- Bonds MF, PPF, NPS, RD. 1.4 Bank, Post Office- Account opening and handling. 1.5 Interest – Meaning, Kinds and Causes of difference in the rate of interest. 1.6 ATM Use, & Credit and Debit card. Activity_ I. Visit to Bank and Post Office and ATM. II. Prepare a folder on different investment schemes.	15

Part C-Learning Resources	
Text Books, Reference Books, Other resources	
Suggested Readings:	
<ul style="list-style-type: none"> • Marketing and consumer Behavior – Raghbir Agrawal • Consumer Protection – S.K. Grover • Consumer co- operative Indian – A.K. Saxena • Consumer Economy – Hamilton • Problems of consumer Behavior -- A Sarkar • Consumer Behavior- Dr. Gaurav Agrawal 	

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Suggested equivalent online courses/ Weblink :

1. **8 Ways to manage your family finances | Citizens**
<https://share.google/DvN1Sw8SAvaHvBamW>
2. **7 Steps to Complete Family Financial Management**
<https://share.google/fITNcefC1KjG5sIpQ>
3. **Consumer Rights Project Class 10 | PDF | Consumer Protection | Justice** <https://share.google/4Z2heU9IEV8rsu7VM>

Financial Management <https://share.google/Wo6vzKqXwrTRjgg50>

Part D – Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment : Continuous Comprehensive Evaluation (CCE) : 40	Class Test Multiple Choice 02 Times	15 x 02 = 30
	Attendance/Class Performance	= 10
		Total :40
External Assessment : University Exam Section :60 Time: 03 Hours	Section (A): 05 MCQ Questions	05 x 02 =10
	Section (B): 05 Short Questions (200 Words each)	05 x 04= 20
	Section (C) :03 Long Questions	03 x 10 =30

Any remarks/ Suggestions:

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Format for Syllabus of Practical Paper

Part A Introduction			
Program: Postgraduate	Class: M.HSc.	Year: I Sem.	Session: 2025-26
Subject: Consumer Education & Family Finance			
1	Course Code	Core 1	
2	Course Title	Consumer Education & Family Finance (Practical)	
3	Course Type (Core Course/Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	Core	
4	Pre-requisite (if any)	To study this course, a student must have had the subject in one of the following B.H.Sc. Degrees.	
5	Course Learning outcomes (CLO)	on successful completion on this course students will be able to - <ol style="list-style-type: none"> 1. Know significance of family income, Expenditure and saving 2. Gain knowledge of consumer protection act, consumer rights and responsibilities. 3. Prepare Budget. 4. Understand the role of consumer forum. 5. Know record keeping and accounting. 	
6	Credit Value	4	
7	Total Marks	Max. Practical Marks:60 Max. CCE Marks:40 Total Marks: 100	Min. Passing Marks: – 24 CCE – 16 Total – 40

Part B- Content of the Course		
Total No. of Practicals (6 hours/Week)		
Total No. of Practicals = 60 hours		
S. No.	Topics	No. of Lectures
1	Visit to consumer Forum.	06
2	Food adulteration detection on local available food items.	06
3	To prepare family Budget Low, Middle and High income group.	06
4	To prepare a budget for college hostel.	06
5	Household account keeping.	06
6	Learn to fill forms for saving and investment in different institutions and agencies.	06

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7	Discuss discuss/ debate on online shopping and report writing.	06
8	Prepare a chart, poster, leaflet on consumer education topics.	06
9	Calculation of income tax.	06
10	Survey of savings and investment schemes.	06

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

- Marketing and consumer Behavior – Raghbir Agrawal
- Consumer Protection – S.K. Grover
- Consumer co- operative Indian – A.K. Saxena
- Consumer Economy – Hamilton
- Problems of consumer Behavior – A Sarkar
- Consumer Behavior- Dr. Gaurav Agrawal

Suggested equivalent online courses/ Weblink :

1. 8 Ways to manage your family finances | Citizens
<https://share.google/DvN1Sw8SAyaHvBamW>
2. 7 Steps to Complete Family Financial Management
<https://share.google/fITNcefC1KjG5sIpQ>
3. Consumer Rights Project Class 10 | PDF | Consumer Protection | Justice
<https://share.google/4Z2heU9IEV8rsu7VM>

Financial Management <https://share.google/Wo6vzKqXwrTRjpr50>

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Activity	10	Viva Voce on Practical	15
Attendance	10	Practical Record File	15
Assignment/ charts/ model/ seminar/ rural service /technology/ Dissemination /Report of Excursion /Lab visit/ survey \ industrial visit	20	Table Work / Practical	30
Total Marks:	40		60

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Theory Paper

Part A- Introduction			
Program: Postgraduate	Class: M.H.Sc	Year: I semester	Session: 2025-26
Subject: Residential Space Designing and Construction			
1	Course Code	Family Resource Management	
2	Course Title	Residential Space Designing and Construction (Theory)	
3	Course Type (Core Course/Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	Core Course - Paper 2	
4	Pre-requisite (if any)	To study this course, a student must have had the subject in one of the following B.H.Sc. Degrees.	
5	Course Learning outcomes (CLO)	By studying this course the students will be able to - 1. Comprehend the current situation of housing conditions. 2. Principles of planning and construction of houses. 3. Plan and draw various types of house plans. 4. Understand about different housing agencies. 5. Know building bye laws. 6. understand eco-friendly buildings. 7. Know housing needs for special person	
6	Credit Value	06	
7	Total Marks	Total Marks: 100 Theory Marks: 60 CCE Marks: 40	Min. Passing Marks: 40 Min. Theory Marks: 24 Min. CCE Marks: 16

Part B- Content of the Course		
Total No. of Lectures (06 hours/Week)		
Total No. of Lectures =90		
Unit	Topic	No. of Lectures
1	History of Vastu Shastra 1.1 Vastu shastra- meaning, definition, history of Vastu shastra. Vastu Purush 1.2 Importance of direction and selection of plot according to Vastu. 1.3 Main rules of Vastu. 1.4 Accessories and plants in Vastu. 1.5 Vastu and water resources, location of Rooms, Doors and Windows. 1.6 Scientific causes of building construction according to Vastu.	15

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II	<p>House planning-</p> <p>1.1 Meaning and definition and importance of house plan</p> <p>1.2 Types of house plan --site plan, floor plan, front elevation plan, section plan</p> <p>1.3 Symbols of house plan.</p> <p>1.4 Basic principle of space designing --aspect, prospect, roominess furniture requirement, grouping, circulation, sanitation, privacy, economy, elegance.</p> <p>1.5 Building by laws.</p> <p>1.6 Classification of areas and Space-- social area and recreation area, service and work area, rest and private area.</p>	15
III	<p>Approach to Housing</p> <p>1.1 Housing meaning and Definition.</p> <p>1.2 History of housing</p> <p>1.3 Housing needs of family</p> <p>1.4 Function of House_ Protective, Economical, Emotional, Personal space, Productive, Recreational space</p> <p>1.5 Selection of site- factors</p> <p>1.6- Housing condition in India rural and urban</p> <p>1.7 Various housing scheme-- Central and local government program</p> <p>1.8 Change in housing needs and standard, Rent Control Act.</p> <p>1.9 National housing policy of India Housing financial scheme government scheme and private scheme</p>	15
IV	<p>Building Construction</p> <p>1.1 Classification of residential building - Hut, bungalow, Twin Bangalow, Row houses, Flats and Apartment, Duplex, Pent House.</p> <p>1.2 Factors affecting selection of housing-- family needs, income, family value, availability of housing, space relative for various</p> <p>1.3 Element of building construction- Foundation, plinth, walls, doors, Window, roof, floor, staircase.</p> <p>1.4 Material required for building construction --Brick, Sand, glass, aluminium, wood, cement, Steel, Gravel, lime stone.</p> <p>1.5 Eco friendly building materials</p> <p>1.6 Prefabricated building materials.</p>	15
V	<p>Kitchen</p> <p>1.1 Kitchen- Meaning, Definition, Ancient Indian traditional approach. Comparison of Indian traditional and western style of kitchen .</p> <p>1.2 Planning of kitchen- location and layout of kitchen</p> <p>1.3. Types of Kitchen - One wall kitchen, Two wall kitchen ,U shape kitchen, Island kitchen, Peninsula kitchen ,Individual Centre kitchen .</p> <p>1.4 work centres</p> <p>1.5 kitchen storage- need, steps in Planning storage. Modern storage consideration.</p> <p>1.6 Modular kitchen</p>	15
VI	Residential space designing consideration	15

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<p>1.1 Safety in housing- earthquake, fire safety, Accident safety</p> <p>1.2 Big and small residential space design</p> <p>1.3 Design for special need- old age, children and blind persons- problem and solution.</p> <p>1.4 Green building concept- need and elements</p>	
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Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

Author Surname, Initials "Book Title", Publisher's name, City/country of publication, Year of publication, Edition No. if any.

Agan Thessie (1948) The house, its plan and use, New York, J. B lippinco

Arora, S. P. and Bindra, S. P. (1990) Building construction, New Delhi, D pat Rai and sons, fourth edition.

Deshpande R.S. (1985) Engineering materials for Diploma students, Poona Book Corporation Ltd.

Deshpande R.S. Build your own homes, Deshpande Publication, Poona

Deshpand. R.S. Homes for middle class of India, Poona Book Corporation

Deshpande R.S. Modern Ideal Homes for India, Deshpande publication tr Pune.

Kirk Patrik W.A. The House of your Dreams, Megraw Hill Book corp. In

B.Ching, Francis (1987) Building cons Delhi, CBS Publishers and distributors, ISBN 0442315320/0-442- 21532-0

Barry, R. (1980) The construction of buildings, London, ELBS, ISB 9780258968444

Time chiara, Joseph de and John Hancock Calendar (1980) Time Sayeg standards for building types, New york McGraw hill Book Company, S 607062654/0-07-016365-4

Alexander, N.S. and Mercourt, B. (1972): Designing Interior E Havanovich Inc.

Ball V.K.: The Art of Interior Design; The Macmillan and Co., New York.

Chudley, R. (1978): Construction Technology; Vol. 1 to 4, ELBS an Group Ltd.

Grandjean, E. (1978): Ergonomics of the Home, Taylor and Francis Ltd.,

Kasu, Ahmed Abdullah, (1992): An introduction to art craft technique, profession of interior design; Bombay: Iquara Publications.

Panero, J. and Zelink, M. (1979): Human Dimensions and Interiors Spa Library of Design, New York.

Steidle, R. and Braton, E.C. (1968): Work in the Home; John Wilen& som

8. Design 02, Residential Space I, JuzhuKongjan

Design 09, Residential Space III, JuzhuKongjan

Shenzhen Nahir Art Design Co./ed, RS 03 Residential Space III, Juzhu

Thames & Hudson, Living Large in Small Spaces, Thames & Hudson

Aurora Cuito, New small homes, Loft Publications. S.1.

Ruth Pretty, The Ultimate Interior Designer, Ward Lock

Stephen Cratti, Making the Most of Small Spaces, Images Publishing Ltd

James Grayson Trulove, Studio Apartments, James Grayson Trulove

Housing for Family Living, Veena Gandotra

Suggested Equivalent Online Course:

https://en.m.wikipedia.org/wiki/House_plan

<https://www.yourarticlelibrary.com/home->

[management/planning-a-residenti](https://www.yourarticlelibrary.com/home-)

[9-principles/47825](https://www.yourarticlelibrary.com/home-)

<https://housing.com/news/building-by-law/>

<https://www.grundig.com/ktchnmag/blog/the-complete->

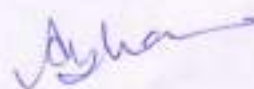
[guide-to-kitchen-la- https://homeguides.sfgate.com/factors-](https://www.grundig.com/ktchnmag/blog/the-complete-)

[consider-design-kitchen-95008.html](https://www.grundig.com/ktchnmag/blog/the-complete-)

https://www.archibus.net/ai/abizfiles/v21.2_hely/archibus

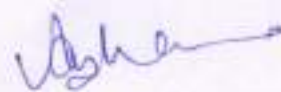
[hely Subsystems](https://www.archibus.net/ai/abizfiles/v21.2_hely/archibus)

[content/web user/space/area concepts/service pic.htm](https://www.archibus.net/ai/abizfiles/v21.2_hely/archibus)



Part D - Assessment and Evaluation

Suggested Continuous Evaluation Methods:		
Internal Assessment: Continuous Comprehensive Evaluation (CCE): 40	Class Test Multiple Choice 02 Times Attendance/Class Performance	15 x 02 = 30 = 10
		Total: 40
External Assessment: University Exam Section: 60 Time: 03 Hours	Section (A): 05 MCQ Questions Section (B): 05 Short Questions (200 Words each) Section (C): 03 Long Questions	05 x 02 = 10 05 x 04 = 20 03 x 10 = 30
		Total: 60
Any remarks/ Suggestions:		



Format for Syllabus of Practical Paper

Part A Introduction			
Program: Postgraduate	Class: M.H.Sc	Year: 1 st Semester	Session: 2025-26
Subject: Residential Space Design and Construction			
1	Course Code		
2	Course Title	Residential Space Design and Construction (Practical)	
3	Course Type (Core Course/Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	Core Course - Paper 2	
4	Pre-requisite (if any)	To study this course, a student must have had the subject in one of the following B.H.Sc. Degrees.	
5	Course Learning outcomes (CLO)	By studying this course the students will be able to- 1. Comprehend the current situation of housing conditions. 2. Know the principles of planning and construction of houses. 3. Plan and draw various types of house plans. 4. Understand about different housing agencies. 5. Know building bye laws. 6. Able to understand eco-friendly buildings. Know housing needs for special person	
6	Credit Value	4	
7	Total Marks	Total Marks: 100 Theory Marks: 60 CCE Marks : 40	Min. Passing Marks: 40 Min. Theory Marks: 24 Min. CCE Marks : 15

Part B- Content of the Course		
Total No. of Practical (6 hours/Week)		
Total No. of Practical = 60 hours		
S. No.	Topics	No. of Lectures
1	Preparation of floor plan for various income groups.	06
2	Preparation of various kitchen layouts on drawing sheet / graph paper.	06
3	Prepare a list of building materials available in local market.	06
4	Cost survey of market for different building materials.	06
5	Prepare elevation plan of house (anyone)	06

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6	Prepare a chart on maximum and minimum reach in kitchen - Horizontal and Vertical.	06
7	Drawing of different designs of doors.	06
8	Drawing of different designs of window.	06
9	Survey of safety measures in houses.	06
10	Prepare a chart on Vastu Purush and house and directions in Vastu.	06

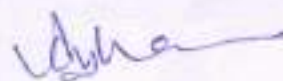
Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. Author Surname, Initials "Book Title", Publisher's name, City/country of publication, Year of publication. Edition No. if any.
2. Deshpande R.S. (1985) Engineering materials for Diploma students, Poona Book Corporation Ltd.
3. Deshpande R.S. Build your own homes, Deshpande Publication, Poona
4. Deshpande R.S. Homes for middle class of India, Poona Book Corporation
5. Deshpande R.S. Modern Ideal Homes for India, Deshpande publication tr Pune.
6. Kirk Patrik W.A. The House of your Dreams, Megraw Hill Book corp. In
7. Ching, Francis (1987) Building cons Delhi, CBS Publishers and distributors, ISBN 0442315320/0-442-21532-0
8. Barry, R. (1980) The construction of buildings, London, ELBS, ISB 9780258968444
9. Time chiara, Joseph de and John Hancock Calendar (1980) Time Sayeg standards for building types. New york McGraw hill Book Company. S 607062654/0-07-016365-4
10. Alexander, N.S. and Mercourt, B. (1972): Designing Interior E Havanovich Inc.
11. Ball V.K.: The Art of Interior Design; The Macmillan and Co., New York.
12. Chudley, R. (1978): Construction Technology; Vol. 1 to 4, ELBS an Group Ltd.
13. Grandjean, E. (1978): Ergonomics of the Home, Taylor and Francis Ltd.,
14. Kasu, Ahmed Abdullah. (1992): An introduction to art craft technique, profession of interior design; Bombay: Iquara Publications.
15. Panero, J. and Zelink, M. (1979): Human Dimensions and Interiors Spa Library of Design, New York.
16. Steidle, R. and Braton, E.C. (1968): Work in the Home; John Wlien& som

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17. Design 02, Residential Space I, JuzhuKongjan
18. Design 09, Residential Space III, JuzhuKongjan
19. Shenzhen Nahir Art Design Co./ed, RS 03 Residential Space III, Juzhuo
20. Thames & Hudson, Living Large in Small Spaces, Thames & Hudson.
21. Aurora Cuito, New small homes, Loft Publications. S. 1.
22. Ruth Pretty, The Ultimate Interior Designer, Ward Lock. Stephen Cratti, Making the Most of Small Spaces, Images Publishing Ltd.
23. James Grayson Trulove, Studio Apartments, James Grayson Trulove
24. Housing for Family Living, Veena Gandotra
25. Agan Thessie (1948) The house, its plan and use, New York, J. B lippinco
26. Arora, S. P. and Bindra, S. P. (1990) Building construction, New Delhi, D pat Rai and sons. fourth edition.

Suggested Equivalent Online Courses:

1. https://en.m.wikipedia.org/wiki/House_plan
2. <https://www.yourarticlelibrary.com/home-management/planning-a-resident-9-principles/47825>
3. <https://housing.com/news/building-by-law/> 4. <https://www.grundig.com/ktchinmag/blog/the-complete-guide-to-kitchenia->
5. <https://homeguides.sfgate.com/factors-consider-design-kitchen-95008.html>
6. <https://www.archibus.net/ai/abizfiles/v21.2/hely/archibus/hely/Subsystems>
7. content/web_user/space/area_concepts/service_pic.htm

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Activity	10	Viva Voce on Practical	15
Attendance	10	Practical Record File	15
Assignment/ charts/ model/ seminar/ rural service /technology/ Dissemination /Report of Excursion /Lab visit/ survey \industrial visit	20	Table Work / Practical	30
Total Marks:	40		60

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Semester II

Paper-1 (Theory)

Part A- Introduction			
Program: Post Graduation	Class: M.H.Sc.	Year- Semester-II	Session:2025-26
1	Course Code	Core - 1	
2	Course Title	Research Methodology and Statistics (Theory)	
3	Course Type	Core	
5	Course Learning outcomes (CLO)	On completion of this course, student will be able to gain knowledge About:- <ol style="list-style-type: none"> 1. Process of research. 2. Research process based on actual researches conducted. 3. Process of research problem formulation. 4. Different types of research procedures. 5. Various research Designs. 6. Different techniques of sampling. 7. Application of sampling procedures for specific research problems. 8. Different tools of data collection. 9. Design different tools of data collection. 10. Data Analysis and statistical applications. 	
6	Credit Value	6	
7	Total Marks	Max Marks: Max. Theory Marks: 60 Max. CCE Marks: 40 Total Marks: 100	Min. Passing Marks: Min. Passing Theory Marks: - 24 CCE - 16 Total - 40

Part B- Content of the Course		
Total No. of Lectures (6 hours/Week)		
Total No. of Lectures 90 hrs		
Unit	Topic	No. of Lectures hrs
I	1 Nyaya and Epistemology in research and Pramanas - Classical Indian School of logic 1.2 Research - meaning definition aims. 1.3 Need and Role of research and statistics in home science. 1.4 Identify problems of research in home science. 1.5 Review of literature. 1.6 Research design.	18

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	1.7 Ethics in research	
II	1.1 Research Types-- Quantitative and Qualitative Research 1.2 Historical Research, Descriptive Research, Methods- Survey, Case study correlational study, Content Analysis, Casual Comparative Research 1.3 Analytical Studies-Pre-Experiment, Experiment Research, Quasi experimental research 1.4 Variables- Meaning, Type, Selection of variables. 1.5 Scientific method	18
III	1.1 Sampling- Meaning, Characteristics, Population and Samples 1.2 Probability sampling, Simple random, Systematic random, Two stage and Multi stage, Cluster. 1.3 Non Probability Sampling - Purposive sampling, Incidental sample, Quota sample, Snowball samples. 1.4 Sample size- General considerations in determination of sample size	18
IV	Data Collection 1.1 Sources of data collection - Primary and Secondary 1.2 Questionnaire 1.3 Schedule 1.4 Interview 1.5 Observation 1.6 Procedure of preparation of tools 1.7 Procedure of data collection 1.8 Data analysis- Coding of responses	18
V	1.1 Hypothesis- Meaning, Characteristics, Types, Characteristics of good hypothesis 1.2 Testing of hypothesis - Type 1 and type 2 errors 1.3 Chi square test 1.4 ANOVA One and Two way 1.5 Randomised block design 1.6 Research report writing	18

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested equivalent online courses/ weblink:

1. Bell, J. (1999): How to Complete Your Research Project Successfully: A Guide for First-time Researchers, UBSPD, New Delhi.
2. Bell, J. (2005): 4th Ed. Doing Your Research Project: A Guide for First-time Researchers in Education and Social Science, Viva Books, New Delhi
3. Bulmer, M.C. (1981): 2nd Sociological Research Methods: An Introduction,




Macmillan, Hong Kong.

4. Festinger, L. and Katz, D. (1st ed.) (1977): Research Methods in the Behavioral Sciences, Amerind Publishing, New Delhi.
5. Holloway, I. (1997): Basic Concepts of Qualitative Research, Blackwell Science, London.
6. Jain, G. (2021): 5th Ed. Research Methodology: Methods and Techniques, Mangal Deep, Jaipur.
7. Kothari, C.R. (2004): 2nd Ed. Research Methodology: Methods and Techniques, Wishwa Prakashan, New Delhi.
8. Kumar, A. (1997): Social Research Method (The Art of Scientific Investigation), Anmol Publication, New Delhi.
9. Kumar, A. (2002): Research Methodology in Social Sciences, Sarup and Sons, New Delhi.
10. McBurney, D.H. (2012): 9th Ed. Research Methods, Thomson-Wadsworth, Australia.
11. Pande, G.C. (1999): Research Methodology in Social Sciences, Anmol Publication, New Delhi.
12. https://nexusacademicpublishers.com/uploads/portals/Research_Methods_and_Statistics.pdf
13. <https://www.bgs.org.uk/sites/default/files/content/attachment/2017-11-30/Research%20Methods%20and%20Statistics%20by%20Sherri%20%20Jackson.pdf>
14. <https://mrcet.com/downloads/MBA/RMSA%20Digital%20Notes.pdf>
15. https://nexusacademicpublishers.com/uploads/portals/Research_Methods_and_Statistics.pdf
16. Second semester paper 2 research method and statistics
17. <https://www.jsscacs.edu.in/sites/default/files/Files/Statistics%20and%20Research%20by%20Kothari.pdf>

Part D – Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment : Continuous Comprehensive Evaluation (CCE) : 40	Class Test Multiple Choice 02 Times Attendance/Class Performance	15 x 02 = 30 = 10
		Total : 40
External Assessment : University Exam Section : 60 Time : 03 Hours	Section (A): 05 MCQ Questions Section (B): 05 Short Questions (200 Words each) Section (C) : 03 Long Questions	05 x 02 = 10 05 x 04 = 20 03 x 10 = 30
		Total : 60

Any remarks/ Suggestions:

Format for Syllabus of Practical Paper

Part A Introduction			
Program: Postgraduate	Class: M.HSc	Year: II nd Semester	Session: 2025-26
Subject: Research Methodology and Statistics			
1	Course Code	Core-I	
2	Course Title	Research Methodology and Statistics(Practical)	
3	Course Type	Core	
5	Course Learning outcomes (CLO)	On completion of this course, student will be able to gain knowledge about:- <ol style="list-style-type: none"> 1. Process of research. 2. Research process based on actual researches conducted. 3. Process of research problem formulation. 4. Different types of research procedures. 5. Various research Designs. 6. Different techniques of sampling. 7. Application of sampling procedures for specific research problems. 8. Different tools of data collection. 9. Design different tools of data collection. 10. Data Analysis and statistical applications. 	
6	Credit Value	4	
7	Total Marks	Total Marks: 100 Theory Marks : 60 CCE Marks : 40	Min. Passing Marks: 40 Min. Theory Marks : 24 Min. CCE Marks : 16

Part B- Content of the Course		
Total No. of Practical (6 hours/Week)		
Total No. of Practical = 60 hours		
S. No.	Topics	No. of Lectures
1	Classification	08
2	Tabulation	08
3	Graphic presentation of data - Bar and Pie Diagram	08
4	Diagrammatic presentation of data - Histogram, Frequency Curve, Frequency Polygon	08
5	Calculation of Mean, Mode, Median	10
6	Calculation of Standard Deviation	10
7	Calculation of Simple Correlation	08

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Equivalent Online Courses:

1. Sankhyakike mule sidhant (Hind) Or H.K.Kapil.
2. Anusandhan Vidhiya ByP arasnath.
3. Garrett, Henry E. (1971) Statistics in Psychology and education, David Heley and Co.
4. Edwards: Experimental Design in Psychological research
5. Kerlinger: Foundation of Educational Research.
6. SPSS/PC for the IBMPC/Xt.SPSS Inc.
7. Goyal Mathematics statistics.
8. Levin Statistics for Management.
9. Yule An Introductory to the theory of statistics.
10. Moud Introduction to the theory of statistics,
11. Freund Mathematical statistics.
12. Nag Mathematical statistics.
13. Patri Statistical Methods.
14. Choundan Statistics for Business and Economics
15. Singh Principal of Statistics.
16. Thamilgom research methodology,
17. Kothari research methodology.
18. Agrawal Basic Statistics.

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Internal Assessment	Marks	External Assessment	Marks
Activity	10	Viva Voce on Practical	15
Attendance	10	Practical Record File	15
Assignment/ charts/ model/ seminar/ rural service /technology/ Dissemination /Report of Excursion /Lab visit/ survey \Industrial visit	20	Table Work / Practical	30
Total Marks:	40		60

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Paper-2 (Theory)

Part A- Introduction			
Program:	Class: M.HSc IInd Semester	Year: 2025	Session: 2025-26
Subject: Applied Ergonomics			
1	Course Code	Core - 2	
2	Course Title	Applied Ergonomics (Theory)	
3	Course Type	Core	
4	Pre-requisite (if any)	To study this course, a student must have had B.H.Sc. Degree.	
5	Course Learning outcomes (CLO)	On completion of this course, student will be able to gain knowledge about:- 1. Concept of ergonomics, its scope and application. 2. The interaction of man, machine, and environment. 3. Effects of ergonomics on productivity. 4. The furniture designing and construction.	
6	Credit Value	6	
7	Total Marks	Max Marks: Max. Theory Marks: 60 Max. CCE Marks: 40 Total Marks: 100	Min. Passing Marks: Min. Passing Theory Marks: - 24 CCE - 16 Total - 40

Part B- Content of the Course		
Total No. of Lectures (6 hours/Week) Total No. of Lectures 90 hrs		
Unit	Topic	No. of Lectures hrs
I	Introduction to Ergonomics 1.1 Ancient Indian Ergonomic system and its contemporary significance 1.2 Historic background of ergonomics 1.3 Ergonomics- meaning, definition and objectives 1.4 Principles of Ergonomics. 1.5 course of Ergonomics in modern houses 1.6 Nature of work in household and other occupations 1.7 man, Machine and Environment system	15

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II	Anthropometric Assessment 1.1 Definition of anthropometry 1.2 Measurement of body dimensions 1.3 Types of anthropometry - static and dynamic 1.4 Anthropometric considerations 1.5 Postures of human body - Sitting , Standing and Semi sitting 1.6 Anthropometric measurement in sitting, standing postures 1.7 Effects of wrong posture.	15
III	Concepts related to Ergonomics 1.1 scope of Ergonomics in designing houses. 1.2 Concept of work- classification. 1.3 Domestic work, household work. 1.4 Nature of household work. 1.5 Household work classification according to energy consumption - Mild, Medium, Heavy 1.6 Work physiology- meaning and important 1.7 Assessment of physiological cost of work- A- Fundamentals of work physiology B - Energy expenditure of the different activities.	15
IV	Elements of Indoor Environment 1.1 Air conditioning. 1.2 Lighting and illumination- Recommended illumination levels of various tasks. 1.3 Provision for ventilation. 1.4 Noise effects and control. 1.5 Psychological environment.	15
V	Ergonomics and furniture design 1.1 Furniture - Meaning, Importance, classification and styles Various uses of furniture (work, rest, storage), Traditional V/S Modern style 1.2 Materials and Construction -wood, Metal and Other material, Hardware, Fasteners, Joints and Finishing techniques 1.3 Design for vulnerable group- Old age, Physically challenged and Children.	15
VI	1.1 Workstation and Space design -Designing ergonomic workstation, Office furniture and spaces for homes and leisure 1.2 Age and Ability considerations 1.3 Flooring 1.4 Accidents in homes	15

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Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. Weerdmister B.A. & Dul J. Ergonomics for Beginners, Taylor & Francis.(1997)
2. Deleha S.: Elements of Work Study (1998)
3. Anne Waugh & Allison Grant: Anatomy & Physiology in Health&Illness, Churchill Livingstone, Toronto (2001)
4. Beidger Introduction to Ergonomics, McGraw Hill, New York (1994)
5. Kroemer K.H.F. & Egrandjean Taylor&Francis. Fitting the task to the Human (5th Editin, London) (1997)
6. Pheseant Stephaan: Body Space, Anthropometry Ergonomics and the Design of work, Taylor&Francis, London (2001)
7. सिंह सुमन, अणुनोमस इंटरवजन फॉर इंस एंड आर्टिफिशियल, (हमनु क्लिनिकल, ISBN 817-
8. पटेल डी मंजु, अणुनोमस, हटा क्लिनिकल जगल (2015)

Suggested equivalent online courses/ Weblink :

1. <https://en.wikipedia.org/wiki/Workplace>
2. <https://courses.lumenlearning.com/englishforbusiness/chapter/3-1-self-inde-fundamental-to-communication/#:~:text=in%20several%20ways,-Sel%2DConcept.experience%20others%20and%20the%20world>
3. https://en.m.wikipedia.org/wiki/Human_factors_and_ergonomics
<https://www.ergonomics.com.au/what-is-ergonomics/>

Part D-Assessment and Evaluation

Suggested Continuous Evaluation Methods:

Maximum Marks : 100

Continuous Comprehensive Evaluation (CCE): 40 Marks

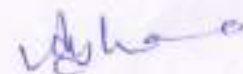
University Exam (UE) 60 marks

Internal Assessment: Continuous comprehensive evaluation (CCE): 40	Class test Assessment/Presentation	40
External Assessment: University Exam Section: 60 Time: 03:00 Hours	Section (A) – Objective type questions Section (B) – Short question (200 Words Each) Section (C) – Long question (500 Words Each)	60

Format for Syllabus of Practical Paper

Part A Introduction			
Program: Postgraduate	Class: M.HSc	Year: II nd Semester	Session: 2025-26
Subject: Applied Ergonomics			
1	Course Code	Core -2	
2	Course Title	Applied Ergonomics (Practical)	
3	Course Type (Core Course/Discipline Specific Elective/Elective/Generic Elective/Vocational/.....)	Core	
4	Pre-requisite (if any)	To study this course, a student must have had the subject in B.H.Sc. Degree	
5	Course Learning outcomes (CLO)	On completion of this course, student will be able to gain knowledge about:- 1. Concept of ergonomics, its scope and application. 2. The interaction of man, machine, and environment. 3. Effects of ergonomics on productivity. 4. The furniture designing and construction.	
6	Credit Value	4	
7	Total Marks	Total Marks: 100 Theory Marks : 60 CCE Marks : 40	Min. Passing Marks: 40 Min. Theory Marks : 24 Min. CCE Marks : 16

Part B- Content of the Course		
Total No. of Practical (6 hours/Week)		
Total No. of Practical = 60 hours		
S. No.	Topics	No. of Lectures
1	Prepare a list of ergonomics factors affecting the work.	06
2	Find out the reaching heights of the classmates in vertical plane	06
3	Find out the reaching heights of the classmates in horizontal plane	06
4	To measure the illumination levels of the following-with illuminometer/luxmeter	06
4.1	Different rooms of a house	
4.2	Kitchen	
4.3	Classrooms	

4.4	Office	
5	Visit any public place and office and prepare a report of the Lumination levels at various important places.	6
6	Measure the noise levels of indoor and outdoor places with sound level meter	6
7	Find out some important anthropometric measurement of classmates in standing postures	6
8	Find out some important anthropometric measurement of classmates in sitting postures	6
9	working drawing construction of various furniture- joints etc.	6
10	Comparator study of modern fun smart furniture versus traditional furniture.	6

Keywords:-

Part C-Learning Resources

Text Books, Reference Books, Other resources

Suggested Readings:

1. Weerdmister B.A. & Dul J. Ergonomics for Beginners, Taylor & Francis. (1997)
2. Deleha S.: Elements of Work Study (1998)
3. Anne Waugh & Allison Grant: Anatomy & Physiology in Health & Illness, Churchill Livingstone, Toronto (2001)
4. Beidger Introduction to Ergonomics, McGraw Hill, New York (1994)
4. Kroemer K.H.E. & Egrandjean Taylor & Francis, Fitting the task to the Human (5th Editin, London) (1997)
5. Pheseant Stephan: Body Space, Anthropometry Ergonomics and the Design of work, Taylor & Francis, London (2001)
6. सिंह सुमन, अग्रणीमास इंटरवजन फॉर हेथ एंड मीडियाडटा, इमानु फिलकेशन, ISBN 817-
7. पाटनी डॉ मंजू, अग्रणीमास, हार फिलकेशन अग्रा (2015)

Suggested Equivalent Online Courses:

1. <https://en.wikipedia.org/wiki/Workplace>
2. <https://courses.lumenlearning.com/englishforbusiness/chapter/3-1-self-inde-fundamental-to-communication/#:~:text=in%20several%20ways,-Self%2DConcept,experience%20others%20and%20the%20world>
3. https://en.m.wikipedia.org/wiki/Human_factors_and_ergonomics
4. <https://www.ergonomics.com.au/what-is-ergonomics/>

Ranjan

Ushar

Part D-Assessment and Evaluation**Suggested Continuous Evaluation Methods:**

Internal Assessment	Marks	External Assessment	Marks
Activity	10	Viva Voce on Practical	15
Attendance	10	Practical Record File	15
Assignment/ charts/ model/ seminar/ rural service /technology/ Dissemination /Report of Excursion /Lab visit/ survey /Industrial visit	20	Table Work / Practical	30
Total Marks:	40		60

