

**Department of Family Resource Management  
(Syllabus of M. Sc.)**



**Course Distribution, Syllabus and  
Text References**



**College of Community Science  
VNMKV, Parbhani**

# M. Sc. (Home Science) in Family Resource Management

## COURSE LAY OUT FOR POST GRADUATE DEGREE PROGRAMME

### Summary of Credit Load/Course Layout

S. No	Subjects	Credit Load
1	Major subjects	20-21
2	Minor subjects	9
3	Supporting Courses	6
4	Masters Seminar	1
5	Masters Research	20

### Credit Layout for M.Sc Programme

Semester	Course Credits					
	Major	Minor	Supporting	Seminar	Total	NCC
First	9	6	3	-	18	2
Second	9	3	3	-	15	2
Third	3	-	-	-	3	2
Fourth	-	-	-	1	1	-
Total	21	9	6	1	37	6

### Semester Wise Distribution of M.Sc. Courses

#### Semester I

S. No	Course No.	Course Title	Credit
<b>Major Courses: 9Credits</b>			
1	FRM 501	Approaches to resource management	3(3+0)
2	FRM 502	Consumer ergonomics	3(2+1)
3	FRM 510	Work and work station Design	3(1+2)
<b>Minor:6 Credits</b>			
4	EXT.504	Research Methods in Behavioural Sciences	3(2+1)
5	FMPE 510	Ergonomics and safety in farm operations	3(2+1)

	<b>Supporting Course: 3 Credits</b>		
6	STAT-511	Statistical methods For Applied Sciences	3(2+1)
		<b>Total</b>	<b>18(11+7)</b>

### Semester II

S.No	Course No.	Course Title	Credit
<b>Major Courses:9Credits</b>			
1	FRM 503	Advanced interior space management	3(2+1)
2	FRM 506	Consumer guidance and counselling	3(1+2)
3	FRM508	Product Design, Testing & Evaluation	3(1+2)
<b>Minor: 3 Credits</b>			
4	EXT 507	Human Resource Development	3(2+1)
<b>Supporting Course: 3 Credits</b>			
5	AG.STAT-531	Data Analysis using Statistical Packages	3(2+1)
		<b>Total</b>	<b>15(8+7)</b>

### Semester III

S. No	Course No.	Course Title	Credit
<b>Major Course: 3 credits</b>			
1	FRM 504	Advanced housing	3(2+1)
2	FRM 599	Master's Research	
		<b>Total</b>	<b>3(2+1)</b>

### Semester IV

Sr.No	Course NO.	Course Title	Credit
1	FRM 591	Master's Seminar	1(0+1)
2	FRM 599	Master's Research	20

## Non Credit Compulsory Courses (NCCC)

### Semester I

S. No.	Course No	Course Title	Credits
1	PGS 501	Library and Information Services	0+1
2	PGS 504	Basic concepts in Library Techniques	0+1

### Semester II

S. No.	Course No	Course Title	Credits
1	PGS 502	Technical Writing and communication skills	0+1
2	PGS 503	Intellectual Property and its Management in Agriculture	1+0

### Semester III

S. No.	Course No	Course Title	Credits
1	PGS 506	Disaster Management	1+0
2	PGS 505	Agricultural Research Ethics and Rural Development Programmes	1+0

**Note: The Non Credit Compulsory Courses are to be offered to all the students of M.Sc. from the Academic year 2009-2010**

## Syllabus

**FRM 501      APPROACHES TO RESOURCE MANAGEMENT      3+0**

- **Objective**
- To acquaint the students with meaning and concepts, processes and significance of management applicable to families.
- **Theory**
- **UNIT I**
- Significance and Scope of Resource Management: The evolving discipline of management: Classical Approach; Behavioural Approach; Systems
- Approach and Scientific Management.
- **UNIT II**
- Managerial Decision Making-Techniques; Creativity; rationality and Risk and Certainty. Theories and Concepts in Resource Management.
- **UNIT III**
- Management process: Planning- Types and Dimensions; Planning in a systems perspective, Factors affecting planning; Implementation-
- Controlling, Checking and Adjusting; Evaluation-Evaluation of Resource-Use and Feedback.
- **UNIT IV**
- Leadership: Importance and Characteristics Motivation- Importance, theories, approaches, elements of sound motivation; - Organisation, supervision and communication.
- **Suggested Readings**
- Deacon R & Firebaugh F. 1981. Family Resource Management – Principles and Applications. Allyn & Bacon.
- Gross IH, Crandall EW & Knoll MM. 1980. Management for Modern Families. Prentice Hall.
- Kotler P. 2004. Principles of Management. TEE Publ.

- Murugan MS. 2005. Management Principles and Practices. New Age International.
- Seetharaman P, Batra S & Mehram P. 2005. An Introduction to Family Resource Management. CBS. Singh N. 2000. Principles of Management: Theories, Practices and Techniques. Deep & Deep.
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**FRM 502**

**CONSUMER ERGONOMICS**

**2+1**

- **Objective**
- To acquaint students with anthropometry study related to Man, Machine and Environment system interactions and its application in reducing human cost of work.
- **Theory**
- **UNIT I**
- Significance and scope of ergonomics – Man, Machine and Environment
- system interactions – Anthropometry; principles, measurements:
- Application of Anthropometry in Ergonomics and Design – Human body in relation to Ergonomic study.
- **UNIT II**
- Fundamentals of Work Physiology; Muscular efforts, Energy consumption,
- Body size and movements; Physical fitness: measurement using different techniques.
- **UNIT III**
- Mechanical parameters; Work postures Postural variations and discomfort; Measurement - Physical work capacity and factors affecting energy requirements and costs for various activities; fatigue.
- **UNIT IV**
- Environmental parameters; measurement, evaluation and effect on worker and work performance – Visual Ergonomics – illusions and accidents –
- Ergonomic investigations: Techniques and problems – Ergonomic requirements for people with special needs.
- **Practical**
- Anthropometry and its statistical treatment for design applications.
- Methodologies for assessment of ergonomic cost of work in terms of

- physiological indices. Measurement of physical workload. Determination of physical fitness using various techniques - Measurement of posture and postural discomfort using Ergo Software - Measurement of various environmental parameters, evaluation and effect on worker and work performance.
- **Suggested Readings**
- Bridger RS. 1994. Introduction to Ergonomics. McGraw Hill.
- Dalela S & Saurabh. 1999. Textbook of Work Study and Ergonomics, Standard Publ.
- Grandgean E. 1978. Ergonomics of the Home. Taylor & Francis.
- Ian Galer. 1982 Applied Ergonomics Handbook. Butterworths & Co.
- Panero J & Zelnik M. 1979. Human Dimension and Interior Space. Whitney Library of Design.
- Singh S. 2007. Ergonomics Interventions for Health and Productivity. Himanshu Publ.

**FRM 503**

**ADVANCED INTERIOR SPACE MANAGEMENT**

**2+1**

- **Objective**
- To make students understand the new dimensions and future challenges of interior designing and to acquaint them with latest trends in functional designing of space, interiors and surroundings.
- **Theory**
- **UNIT I**
- Effect of interior design and decoration on family well being with particular reference to special needs - Functional and aesthetic considerations in use of elements and principles of design.
- **UNIT II**
- Advances in design process of residential and commercial interiors.
- **UNIT III**
- Trends in decoration treatments for interiors and interior backgrounds from past to present: furniture, furnishings, lighting, fittings and fixtures, surface materials, finishes.
- **UNIT IV**
- Changing trends in thermal, acoustics and safety mechanisms. Solutions for problem areas in residential and commercial building interiors.

- **Practical**

- Critical analysis of interiors of a selected residential and non-residential buildings and suggested improvements – Visits to building design institutes, hotels, furniture and furnishing show rooms and residential buildings to identify new trends – Market survey of surface materials, finishes, fittings and fixtures – Detailed cost estimation of interior design and decoration elements.

- **Suggested Readings**

- Allen PS, Stimpson MF & Jones LM. 2000. Beginnings of Interior Environments. Prentice Hall.
- Choudhari SN. 2006. Interior Design. Avishkar Publ.
- Gilliatt M. 1981. The Decorating Book. Pantheon Books.
- Panero J & Zelnik M. 1979. Human Dimension and Interior Space. Whitney Library of Design.
- Parikh A, Robertson D, Lane T, Hilliard E & Paine M. 2000. The Ultimate Home Design Source Book. Conran Octopus.
- Pears A, Lawrence M, Hymers P & Howell J. 2000. Working with the Professionals. Marshall Publ.
- Seetharaman P & Pannu P. 2005. Interior Design and Decoration. CBS.
- Zimmerman N. 2003. Home Workspace Idea Book. The Taunton Press.

### **FRM 506 CONSUMER GUIDANCE AND COUNSELING 2+1**

- **Objective**

- To provide knowledge and skill to the students related to consumer protection for rational consumer behaviour.

- **Theory**

- **UNIT I**

- Consumer Education. Rights and Responsibilities of consumer. Consumer

- Cooperatives. Consumer Organisations.
- **UNIT II**
- Significance of consumer guidance and counselling. Consumer protection measures; legal and non-legal.
- **UNIT III**
- Consumer Protection Act, 1986. Consumer Legislations.
- **UNIT IV**
- Consumer Redressal mechanism. Consumer Protection Councils.
- **Practical**
- Visit to local consumer redressal fora. Study the structure and functioning of consumer redressal forum. Understanding the procedures for filing a consumer complaint. Study of the proceedings of consumer court. Visit to local consumer organizations. Study of the procedures in consumer counselling and guidance centre. Mock sessions in handling consumer complaints.
- **Suggested Readings**
- Chadha R. 1995. The Emerging Concepts and Strategies. New Age International & Wiley Eastern.
- Jones RN. 2007. Basic Counselling Skills. Sage Publ.
- Marguerite B. 2000. Consumer Economics: A Multidisciplinary Approach. John Wiley & Sons.
- Schiffman LG & Kaunuk LL. 2004. Consumer Behaviour. Prentice Hall of India.
- Seetharaman P & Sethi M. 2001. Consumerism: Strategies and Tactics. CBS.

**FRM 508                      PRODUCT DESIGN, TESTING AND EVALUATION                      1+2**

- **Objective**
- To expose students to intricacies in product design and quality control measures for varied consumer products.
- **Theory**
- **UNIT I**
- Significance and essentials of product design and consumer demand.



- Anthropometry in design.
- **UNIT II**
- Product services available to consumers. Product safety: hazards and liabilities.
- **UNIT III**
- Quality Control and Standardization for food, textiles, consumer durables and materials. Product Certification.
- **UNIT IV**
- Need for product testing. Product testing techniques and devices. Product evaluation. Product recall.
- **Practical**
- Analyzing the user's option on the design of a specific consumer product.
- Understanding the selected consumer products through guidelines given by manufacturers. Collecting the standardization norms as per health and safety of workers - Conceptualization and development of consumer products with functional alternatives. Designing the prototype of the developed product by using CAD software. Appraisal on the product testing procedures, Processed foods, textiles, electrical & non- electrical Detecting adulterants in food items electrical equipment - Estimating the device efficiency in electrical and non- electrical Equipment.– Visit to quality control laboratories - Detecting adulterants in food items -computerizing testing data – establishing a consumer product testing cell.
- **Suggested Readings**
- Boothroyd G, Dewhurst P & Knight W. 2002. Product Design for Manufacture and Assembly. CRC Press.
- Cross N. 2000. Engineering Design Methods: Strategies for Product Design. Reuters Publ.
- Dumas JF & Redish JC. 1993. A Practical Guide to Usability Testing.
- Greenwood Publ.
- Meilgaard M, Civille GV & Carr BT. 2006. Sensory Evaluation Techniques. CRC Press.
- Otto KN & Wood KL. 2001. Product Design: Techniques in Reverse Engineering, New Age International.
- Parker G & Alstyne MV. 2005. Management Science: The Theory of Information Product Design. INFORMS Publ.

- Roozenburg NFM & Eekels J. 1995. Product Design: Fundamentals and Methods, Wiley.
- Sharma DD. 2000. Total Quality Management. Sultan Chand and Sons.
- Stone H & Sidel JL. 2004. Sensory Evaluation Practices. Academic Press.
- Ulrich KT & Eppinger SD. 1995. Product Design and Development. Irwin McGraw Hill.

**FRM 510**

**WORK AND WORKSTATION DESIGN**

**1+2**

- **Objective**

- To acquaint students with the interrelatedness of work, worker and workstation environments and infuse an interdisciplinary approach to workstation engineering and techniques to reduce human cost of work.

- **Theory**

- **UNIT I**

- Work, worker workplace interrelationship – Meaning and components of work: work analysis using different techniques - components of worker input – Body Mechanics.

- **UNIT II**

Functional design: concept – design and arrangement of different work centers

- **UNIT III**

Procedures for studying workplace design: formal and informal techniques workplace design for different postures.

- **UNIT IV**

Ergonomic factors in design and selection of household goods–displays and controls–functional designing of workplace and equipment- hazards of illdesigned workstations.

- **Practical**

Determining the space relationships as per workers' anthropometry, posture and movement at selected workstations - Measuring and recording the anthropometric measurements of worker and dimensions of equipment /furniture used in the unit workspace. Measurement of work costs in terms of physiological indices - Preparing floor and perspective plans of a unit work space - Selecting and analyzing a work station in relation to design features, space relationships, dimensions of equipment and furniture, environment control methods and developing 2D and 3D workplace design Evaluation of existing workstation in a residential and commercial setup and suggesting an ergonomic design layout

- **Suggested Readings**

- Barnes RM. 1980. Motion and Time Study. John Wiley & Sons.
- Bridger RS. 1994. Introduction to Ergonomics. McGraw Hill.
- Dalela S & Saurabh. 1999. Textbook of Work Study and Ergonomics.

- Standard Publ.
- Grandgean E. 1978. Ergonomics of the Home. Taylor & Francis.
- Ian Galer. Applied Ergonomics Handbook. Butterworths.
- Mundel M.1978. Motion and Time Study. Prentice Hall.
- Panero J & Zelnik M. 1979. Human Dimension and Interior Space.
- Whitney Library of Design
- Singh S. 2007. Ergonomics Interventions for Health and Productivity.
- Himanshu Publ.

**FRM 504**

**ADVANCED HOUSING**

**2+1**

- **Objective**
- To acquaint the students with various building features, materials, latest building techniques, vastu sharstra, acoustics, rain water harvesting and landscape planning.
- **Theory**
- **UNIT I**

Historical perspective of the architectural features of buildings –Structural features of residential buildings in different geo-climatic conditions -Social-cultural and economic issues in housing.

- **UNIT II**

Housing stock quality, demand and supply in urban and rural areas of India- Role of Government and non-government organizations in providing and regulating housing needs.

- **UNIT III**

Ancient Science of house design - Emerging techniques in the house construction - Low-cost building materials and fabrication techniques – Eco and Ergo-friendly house design House wiring, sanitary fittings, acoustics - Rain water harvesting structures for houses.

- **UNIT IV**

Estimation of cost and housing finance - Recent developments in building Bye-Laws - Housing research- Landscaping planning.

- **Practical**

Analysis of building forms in different geo-climatic region – Visit to housing development organization and building design centres – Evolving Eco, Ergo and Space saving house plan for

selected geo-climatic region for different socio-economic categories through CAD Estimation of Cost of construction - Assessment of existing house plans and suggesting cost effective renovations - Landscape planning.

- **Suggested Readings**

- Ambadker SN. 2000. Rural Housing: Agro-socio-economic Impact. Special Indian Ed. Agrobios.
- Lal AK. 1999. Handbook of Low Cost Housing, New Age International.
- Mahadeva M. 2002. Housing in India: The Situation, Development and Challenges. Orient Longman Publ.
- Morris EW. 1979. Housing Family and Society. John Wiley & Sons.
- RajaRao YN & Subrahmanyam Y. 2002. Planning and Designing of Residential Buildings. Standard Publ