

SHIVAJI UNIVERSITY, KOLHAPUR

SYLLABUS FOR MASTER OF ARTS

HOME SCIENCE

TITLE : M. A. Part II (Home –Science)
Under Faculty of Science.

YEAR OF IMPLEMENTATION: Revised Syllabus will be implemented from
June 2011 onwards.

DURATION : The Course shall be a full time course. The
Duration of the course shall be two years.
M.A. II – One Year.

PATTERN OF EXAMINATION : Annual Practical and related Activities-Internal
Examination

MEDIUM OF INSTRUCTION : English or Marathi.

STRUCTURE OF COURSE : M.A. Part – I (No. Of Papers - 4)

| Sr. No. | Paper No. | Name Of the subject | Distribution of Marks | | | |
|---------|-----------|------------------------------------------------------|-----------------------|-----------|------------------------------------|-------|
| | | | Theory | Practical | Seminar/ Assignment/ Project | Total |
| 1 | I | Research Methods and Statistics | 80 | -- | 20 | 100 |
| 2 | II | Human Development and Marriage – Family Relationship | 80 | -- | 20 | 100 |
| 3 | III | Theory of Management and Management of Resources | 80 | -- | 20 | 100 |
| 4 | IV | Dietetics and Community Nutrition | 80 | 20 | -- | 100 |

M.A. Part – II (No. Of Papers - 4)

| Sr. No. | Paper No. | Name of the Subjects | Distribution Of Marks | | | |
|---------|-----------|----------------------------------------------------------|-----------------------|-----------|--------------------------------|-------|
| | | | Theory | Practical | Seminar/ Assignments / Project | Total |
| 1 | V | Household Equipments and Ergonomics | 80 | -- | 20 | 100 |
| 2 | VI | Programme Development and Extension Training Management. | 80 | -- | 20 | 100 |
| 3 | VII | Family Clothing and Traditional Textiles | 80 | 20 | -- | 100 |
| 4 | VIII | Food Preservation and Food Quality Control. | 80 | 20 | -- | 100 |

7. SCHEME OF TEACHING :

M.A. Part - I (Home Science)

| Sr. No. | Paper No. | Name of the Subjects | Teaching Scheme /Week | Lectures |
|---------|-----------|------------------------------------------------------|-----------------------|--------------------------------------------------|
| | | | Theory | Practical/ Seminar/ Assignment/ Project Total |
| 1 | I | Research Methods and Statistics | 4 | 4 |
| 2 | II | Human Development and Marriage – Family Relationship | 4 | 1 5 |
| 3 | III | Theory of Management and Management of Resources | 4 | 1 5 |
| 4 | IV | Dietetics and community Nutrition | 4 | 3 7 |

M.A. Part – II (No. Of Papers -4)

| Sr. No. | Paper No. | Name of the Subjects | Teaching Scheme Lectures /Week | | |
|---------|-----------|----------------------------------------------------------|--------------------------------|---------------------------------------|-------|
| | | | Theory | Practical/Seminar/ Assignment/Project | Total |
| 1 | V | Household Equipments and Ergonomics | 4 | 1 | 5 |
| 2 | VI | Programme Development and Extension Training Management. | 4 | 1 | 5 |
| 3 | VII | Family Clothing and Traditional Textile | 4 | 3 | 7 |
| 4 | VII | Food Preservation and Food Quality Control. | 4 | 3 | 7 |

Equivalence of Papers

M. A. Part - I Home Science

| Old Pattern | | Revised pattern | | |
|-------------|-----------------------------------------------------|-----------------|-----------------------------------------------------|--|
| Paper No. | Title of the Paper | Paper No. | Title of the Paper | |
| I | Research Methods and Statistics | I | Research Methods and Statistics | |
| II | Human Development and Marriage –Family Relationship | II | Human Development and Marriage –Family Relationship | |
| III | Theory of Management and Management of Resources | III | Theory of Management and Management of Resources | |
| IV | Dietetics and Community Nutrition | IV | Dietetics and Community Nutrition | |

M. A. Part - II Home Science

| Old Pattern | | Revised pattern | | |
|-------------|---------------------------------------------------------|-----------------|---------------------------------------------------------|--|
| Paper No. | Title of the Paper | Paper No. | Title of the Paper | |
| V | Ergonomics and Interior Space Designing | V | Household Equipments and Ergonomics | |
| VI | Programme Development and Extension Training Management | VI | Programme Development and Extension Training Management | |
| VII | Family Clothing and Traditional Textiles | VII | Family Clothing and Traditional Textiles | |
| VII | Food Preservation and Food Quality Control. | VII | Food Preservation and Food Quality Control. | |

8. SCHEME OF EXAMINATION :

- The Examination shall be at the end of each academic year.
- All Papers shall carry 80 marks for Theory papers and 20 marks for Practicals / Seminars / Assignments / Project.
- The evaluation of the performance of the students in theory shall be on the basis of Annual Examination as mentioned above.
- Question paper will be set in the view of the entire syllabus preferably covering each unit of the syllabus.

Nature of Question paper (Theory)

Section –I

- There will be one objective type question (Multiple choice) having 5 marks.
- One short note type question having 15 marks (Three short notes out of five)
- Two descriptive questions with internal choice having 10 marks each i.e. $10 \times 2 = 20$ Marks.

Section - II

- There will be one objective type question (Multiple choice) having 5 marks.
- One short note type question having 15 marks (Three short notes out of five)
- Two descriptive questions with internal choice having 10 marks each i.e. $10 \times 2 = 20$ Marks.

○

- The evaluation of the performance of the students in Practical/Project/Seminar/Assignment shall be on the basis of Annual Internal examination as mentioned separately in the syllabus of each paper.
- Standard of Passing-
 - In order to pass in a theory paper and practical a candidate shall have to secure 40% marks in each theory and practical at the university examination. Candidate shall be declared to have passed the examination in pass class if he/she passes in all the eight papers.
 - A Practical will be separate head of passing.
 - In order to secure II nd class, a candidate shall have to secure at least 50% or more marks.
 - In order to secure I st Class with distinction a candidate shall have to secure 70% or more marks.
 - The class will be awarded on the aggregate total of all the eight papers of part I & II at the University examination.

M. A. Part II (HOME SCIENCE)

Paper V- HOUSEHOLD EQUIPMENTS AND ERGONOMICS

| | | | |
|------------------------------------|-------------------|---|-----|
| Work Load – 5 Lectures/Week | Total Marks | - | 100 |
| Theory - 4 Lectures/Week | Theory | - | 80 |
| Seminar / Project - 1 Lecture/Week | Seminar / Project | - | 20 |

Objectives:

1. To understand operational principles, use and care of household, recreational and advanced equipments.
2. To understand the materials used for household equipments.
3. To create awareness about ergonomics in work effectiveness and efficiency.
4. To understand importance of anthropometric dimensions of worker at work and rest.

Section – I Household Equipments

Unit I : Introduction to Household Equipments

1. Meaning and Importance of various household equipments.
2. Classification of Household equipments.
3. Factors affecting selection of equipments.

Unit II : Materials used for Household Equipments.

1. Base Material - Aluminums, Iron ,Steel, Copper, Glass, Plastic
2. Finishes - Mechanical, Applied
3. Insulating material - Mica, fiberglass, fiber wool, Mineral wool,
Plastic, Foam

Unit III : Operational Principles, Use and care of Electrical equipments.

- | | |
|----------------------------|--------------------------------|
| 1. Mixer – juicer- grinder | 2. Refrigerator |
| 3. Food Processor | 4. Microwave Oven |
| 5. Oven and cooking range | 6. Geyser, water immersion rod |
| 7. Washing machine | 8. Iron |
| 9. Vacuum Cleaner | 10. Hair Dryer |

Unit – IV : Operational Principles, Use and Care of Non-electrical equipments.

- | | |
|--------------------|-----------------|
| 1. Cleaning Map | 2. Gas Stove |
| 3. Smokeless chula | 4. Solar Cooker |

- | | |
|--------------------|-----------------------|
| 5. Pressure Cooker | 6. Solar water heater |
| 7. water filter | |

Section II

Ergonomics

Unit V- Concept, Scope, Importance and Principles of Work

Simplification and Ergonomics.

Unit VI - Anthropometric Dimensions of worker at work and rest

- Elbow room, Clearance space for operating equipments and working heights for various activities.

Unit VII - Importance of Space, Light, Ventilation and Sound in work performance.

Unit VIII - Selection, use and care of Recreational and Advanced equipments.

- | | |
|------------------|---------------|
| 1. Radio | 2. Television |
| 3. Tape recorder | 4. Camera |
| 5. DVD/CD Player | 6. Computer |
| 7. Cell phones | |

• **Examination Pattern of Internal Assessment - 20 Marks**

- | | | |
|----------------------------------|---|----------|
| 1. Project or Seminar | - | 20 Marks |
| Submission of Project or Seminar | - | 10 Marks |
| Viva Voce | - | 10 Marks |

➤ **REFERENCE BOOKS :**

- | | | |
|----------------------------------------------------------------------------------------|---|--------------------------------------------|
| 1. Household Physics | - | Aveny H., Mac Millan Co. |
| 2. Household Equipments | - | K.K.Bali, Orient paper backs, New Delhi |
| 3. विद्युत उपकरणाची निगा व दुरुस्ती ल.प्रा. प्रकाश शहा अर्त विद्युत शाळा प्रकाशन, पुणे | | |
| 4. International Review of Ergonomics-Oborne - International Book House, Delhi | | |
| 5. गृहव्यवस्थापन व गृहकला क्षमा लिमये विद्या प्रकाशन नागपूर | | |
| 6. Elements of Home-Science | - | Premlata Mulik |

7. Household Materials : A Manual for Care and Maintenance - Manchanda, Goel, Rammurthy, Kumar. Wheeler publication, New Delhi.
8. Handbook for Homemakers - Premalata Mulik, Kalyani Publication, New Delhi
9. Work place dimensions and physiological costs to worker - Hudson W.R. The journal of industrial Engineering.
10. Household Equipment - Peet, L.J. & Pickets, M.S. John Wiley and sons.
11. Management in Family Living - Nickel and Dorsey
12. Ergonomics - Veena Gandotra, Krishna Oberoi. Dominant Publishers & Distributors. New Delhi (-2006)

Journals/Magazines

1. Inside Outside
2. Fevicol Book of Furniture
3. Interiors

M. A. Part II (HOME SCIENCE)

**PAPER VI –PROGRAMME DEVELOPMENT AND
EXTENSION TRAINING MANAGEMENT**

| | | | |
|------------------------------------|-------------------|---|-----|
| Work Load – 5 Lectures/Week | Total Marks | - | 100 |
| Theory - 4 Lectures/Week | Theory | - | 80 |
| Seminar / Project - 1 Lecture/Week | Seminar / Project | - | 20 |

Objectives:

1. To enable the students to acquire knowledge regarding programme planning, programme development, leadership and extension evaluation.
2. To understand the need and importance of training, components of training and various training methods.
3. To acquaint with training management, monitoring and evaluation.
4. To enable the student to prepare programme plan for community.

**Section – I
Programme Development**

Unit I : Extension Programme

- i) Concept, Definition of Extension Programme
- ii) Importance of Extension Programme
- iii) Objectives- Definition, importance and levels of objectives.
- iv) Objectives of extension programmes.

Unit II : Programme Planning.

- i) Concept, Definition and Principles of programme planning
- ii) Criteria for good programme planning.
- iii) Criteria for involvement of people in programme planning.

Unit III : Programme Development Process and Extension Evaluation.

1. Definition, steps involved in Programme Development process
2. Programme Development Cycle

3. Concepts, Definitions, Degree of evaluation, Values of evaluation, Six keys of evaluation.

Unit – IV : Leadership -

1. Definition, Characteristics of leadership.
2. Functions of leader
3. Role and importance of leadership development in extension.

Section II

Extension Training Management

Unit V- Extension Training

1. Concept and definition
2. Importance and need of training in extension
3. Types of training

Unit VI - Components of training and Training Methods

1. Objectives, concepts and components of Training
2. Training Methods – Lecture, Group discussion, Buzz session, Role play, Workshop , Panel Discussion, Seminar, Symposium etc.

Unit VII - Training Management, Monitoring and Evaluation.

1. Meaning, Systems of Management, Participatory Rural Appraisal (PRA) in Training
2. Training evaluation - Definition and importance of evaluation in training

Unit VIII - Organizing Human and Non – Human Resources for Training.

1. Resources for Training.
2. Role of government and non – government agencies in organizing training – Community Development, NAEP,KDS , NABARD, NGO – YASHADA and other local NGOs

Examination Pattern of Internal Assessment - 20 Marks

| | | |
|----------------------------------|---|----------|
| Project or Seminars | - | 20 Marks |
| Submission of Project or Seminar | - | 10 Marks |
| Viva Voce | - | 10 Marks |

➤ REFERENCE BOOKS :

1. Dhama O.P. and Bhatnagar O.P.(1991), Education and Communication for Development, Oxford and IBH Publishing Co, New Delhi.

2. ROY G.L. (1991), Extension communication and management, Naya Prakashan, Culcutta
3. Sandhu A.S.(1994), Extension Programme Planning, Oxford and IBH Publishing co. New Delhi.
4. Supe S.V.(1987), An introduction to Extension Education Oxford and IBH Publishing co. New Delhi.
5. Advi Reddy, Extension Education, Baptata publications Baptata
6. Lytibs. RoIf P. and Pak (1998)- Training and Development
7. Mishra D.C.(1990), New Directions in Extension Training
8. Sigh R.P. Training Management.

• **Journals –**

1. Social welfare
2. Yojana
3. Kurukshetra
4. International Journal of Extension Education
5. Indian Journal of Home science.

M.A. Part II (HOME SCIENCE)

Paper VII – FAMILY CLOTHING AND TRADITIONAL TEXTILES

| | |
|------------------------------------|-------------------------|
| Work Load - 7 Lectures/Week | Total Marks - 100 |
| Theory - 4 Lectures/Week | Theory - 80 |
| Seminar / Project - 3 Lecture/Week | Seminars / Project - 20 |

Objectives:

1. To understand clothing needs of family members and factors affecting selection of clothing.
2. To get acquainted with selection of clothing for different age groups, seasons, occasions, activities etc.
3. To acquire knowledge of Traditional Textiles and costumes of India.
4. To enable the student to develop skills in clothing construction.

Section – I

Family Clothing

Unit I – i) Introduction, scope and importance of clothing.

ii) Factors influencing selection of family clothing

Unit II : Clothing for Different age groups and Stages – Selection and Types of garments.

- i) Clothing for New born and Toddler
- ii) Clothing for Preschool and School Children.
- iii) Clothing for Adolescent.
- iv) Clothing for Pregnant and Lactating mother
- v) Clothing for old age.

Unit III : Clothing for Various Seasons, occasions, occupations and activities.

1. Clothing for various seasons - summer, winter, rainy
2. Clothing for special occasions - Party, wedding,
3. Clothing for various occupations - doctors, lawyers, nurses, teachers, automobile workers etc.
4. Clothing for sports person

Unit – IV : Clothing management

1. Developing skills in clothing management.
2. Budgeting for family clothing
3. Wardrobe planning
4. Training the children for selection and care of clothing

Section II

Traditional Textiles And Consumer Education.

Unit V- Traditional Textiles of India - Types and Uniqueness :

Maharashtra, Karnataka, Kerala, Tamil Nadu, Andhra Pradesh, Gujarat,
West Bengal, Jammu & Kashmir

Unit VI - Traditional Costumes of India – Brief History.

Traditional Costumes of Maharashtra and Punjab

Unit VII - i) Principles of fitting

ii) Merits and Demerits of homemade, Tailor-made and readymade garments.

Unit VIII - Consumer Education.

1. Fabric Quality Criteria
2. Labels and Tags

➤ Practicals and Related Activities

1. Drafting, Cutting and stitching of Party Frock
(10 to 12 years old girl)
2. Drafting, cutting and stitching of Sari Blouse
 - a. Simple with Yoke
 - b. Katori Blouse
3. Drafting, Cutting and stitching of shirt
4. Collection of fabric samples used in clothing for different age group
(minimum 10 samples)
5. Collection of Traditional Textiles of India (minimum 5 samples)

- **Examination Pattern of Practical - 20 Marks**

Scheme of Marking for Practical Examination.

| | | | | |
|---------------------------------------------|---|--------------------------|---|----------|
| Submission of Garments | - | 04 Marks/Garment (4 x 4) | - | 16 Marks |
| Journal and submission of sample collection | | | - | 04Marks |

REFERENCE BOOKS :

1. Clothing for children - Thompson and Rea, John Wiley and Son
2. Clothing - Latzke and Quitan, Hippincot co, Chicago
3. Fabric and Dress - Rathbone and Tarplay Hongten Miffin Co.
4. Manual of Children's Clothing - Pandit Savitri, Orient Longmans Ltd.
5. Guide to Modern Clothing – Starn M and Gieser
6. Fundamentals of Textiles and Care – Dhantyagi Sushila
7. Costumes and Textile Art of India - Jamilla Brij Bhishan, D.B. Tara Porewala and Sons
8. Textiles and Embroideries of India - Marg Publications.
9. Traditional Indian Textiles, John Gillow, Nicholas Barnord Thames and Hudson Ltd., London.
10. Comparative Clothing Construction - Lewis.
11. Hand woven Fabrics of India, edited by Jasteen Dhamija and Jyotindia Jain Maping Publishing Pvt, Ltd., Ahmedabad.
12. Traditional Textiles of India - by kamaladevi Chatopadhyay
13. Textiles and Laundry - Aruna Gaur, Jyoti Gaur, Research Publications, Jaipur
14. वस्त्रशास्त्र - सौ. आढावा विमल, महाराष्ट्र विद्यापीठ ग्रंथ निर्मिते मंडळ, औरंगाबाद.
15. पारिवारीक परिधान व्यवस्था - श्रीमती मंजु पाटणी, स्टार पब्लीकेशन, आग्रा
16. शास्त्रोक्त शिवणकला भाग 1 व 2 - हेगडे, हेगडे टेलरींग कॉलेज, पुणे
17. वस्त्रशास्त्राची संकल्पना व फॅशन डिझायनिंग - डॉ उज्ज्वला

M.A. Part II (HOME SCIENCE)
Paper VII - FOOD PRESERVATION AND
QUALITY CONTROL

| | | | |
|------------------------------------------|-------------|---|-----|
| Work Load – 7 Lectures/Week | Total Marks | - | 100 |
| Theory – 4 Lectures/Week | Theory | - | 80 |
| Seminar / Project - 3 Lecture/Week/Batch | Project | - | 20 |

Objectives:

To enable the students-

5. To understand the principles and methods of food preservation.
6. To make aware about food microbiology and food hygiene.
7. To acquaint with food laws and standards and analyse food for its quality control.

Section – I

Food Preservation

Unit I : Food Micrology

- i) Bacteria, Yeast, Moulds and Viruses- types and characteristics
- ii) Factors affecting micro-organisms

Unit II : History and Principles of Food Preservation.

1. History in brief
2. Principles of Food Preservation.

Unit III : Food Preservation Methods.

- i) Asepsis and washing
- ii) By use of High Temperature – Pasteurization, Boiling and canning. Factors affecting micro-organisms by use of high temperature and Thermal Death Time.
3. Methods by use of Low Temperature – Cellars, Chilling, Freezing, Cold Storage. Factors affecting micro-organisms by use of low temperature

Unit – IV : i) Method by use of Drying

- a) Non-Mechanical - Sun drying, Fumigation, Salting
- b) Mechanical - Freeze drying, Foam mat, Spray and drum drying.

ii) Methods by use of Preservatives:

- a) Natural and Artificial preservatives
- b) Chemical preservatives - Organic, Inorganic
- c) Food additives and synthetic preservatives

iii) Methods by use of Radiation:

- a) Types of radiation methods
- b) Effect of radiation on foods

Section – II

Food Quality Control

Unit V : i) Food Contamination – Natural handling and processing

ii) Food Spoilage – Food infection, Food poisoning

Unit VI : Food Laws and Standards

- 1. Food Adulteration Act
- 2. ISI, Agmark , FPO
- 3. Food Standards

Unit VII : i) Analysis of Food Components :

- a) Total soluble solids, total sugar, total protein, total crude fat from selected foods by use of pH meter
- b) Refractometer and Spectrophotometer

ii) Sensory Evaluation and Storage Stability

- a. Types of sensory evaluation
- b. Storage studies – 3 months, 6 months, 9 months, 1 year.

Unit VIII : Preparation of the Products For Marketing

- 1. Principles of Packaging and Labeling
- 2. Materials used for food packages.
- 3. Sealing methods
- 4. Calculation of market cost and profit.

➤ Practicals :

- 1. Preparation of Jam, Jelly, Ketchup
- 2. Preparation of Synthetic syrups, Squash, Marmalade
- 3. Preparation of Pickles – Mix Vegetables, Mango, Lemon, Chillies
- 4. Preparation of Papad, Potato wafers
- 5. Analysis of pH, TSS, Total sugar, protein and fats

6. Visit to Canning Industry and Pasteurization unit.

➤ **Pattern of Practical Examination and Scheme of Marking. Total - 20 Marks**

1. Preparation of any one product - 10 Marks

Jam/Ketchup/Synthetic syrup/Squash/Pickles

Taste - 2 Marks

Appearance - 2 Marks

Texture - 2 Marks

Doneness - 2 Marks

Overall - 2 Marks

Total - 10 Marks

2. Analysis of any one from the given food material - 05 Marks

PH / TSS / Total Sugar / Protein / Fat

3. Submission Of Report and Journal - 05 Marks

➤ **REFERENCES:**

1. Food Microbiology : Frazier
2. Technology of Food Preservation : Desrosare N.W. ABT Pub – company
3. Food Science and Technology : Magnum Prike
4. Food Preservation of fruits and vegetables : King
5. Preservation of Foods : Girdharilal Siddhoyya
6. Journal of Food Science and Technology
7. Food Hazards and food Hygiene – Seema Yadav
8. प्रा. राजकुमार कांबळे - “ अन्नसंरक्षण”