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SHIVAJI UNIVERISTY, KOLHAPUR-416 004. MAHARASHTRA
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दुरध्वनी ईपीएबीएक्स 2609000 अभ्यास मंडळे विभाग 2609094 तार: ुनिशिवाजी
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SU/BOS/Science/ 1390

Date: 15/3/2010.

To,
The Principal,
All Affiliated Home Science Colleges
Shivaji University,
Kolhapur.

Sub-: Regarding the Syllabi of Pre- Ph.D - Home Science.

Sir/Madam,

With reference to the subject mentioned above, I am directed to inform you that the University authorities have granted approval to the syllabi of Pre- Ph.D -Home Science.This Syllabi will come into force with effect from the academic year 2009-10. The C.D. containing aforesaid syllabi is enclosed herewith for information

Further this syllabi also available on the University Website-www.unishivaji.ac.in.

This syllabi is communicated for information of those teachers /students who would like to pursue the repective degree in coming future and also for office records.

Thanking you,

Yours faithfully,
Sd/-
Dy. Registrar.

Encl:- As above.

Copy f.w.c.to-

- 1) The Dean, Faculty of Science.
- 2) The Chairman, Board of Studies in Home Science.

Copy to:-

- 1) Appointment Section
- 2) B.Sc. Section
- 3) P.G. B.U.T.R
- 4) Computer Centre

For Information & necessary action

Shivaji University, Kolhapur
Syllabus for Pre. Ph. D. in Home-Science

- Admission Rules and Regulations** : As per Shivaji University and Govt. Norms.
- Mode of admission** : Through entrance exam. conducted by the University department / college
- Medium of Instruction** : English / Marathi
- Eligibility for admission** : M. Sc. Home-Science in any specialization i.e.
Food and Nutrition,
Home-management/ Family Resource management,
Child Development / Human Development,
Textile Science and Clothing/Clothing and textile/
textile clothing and apparel designing
Home Science Extension Education / Extension,
Education and communication,
Food Science and Technology,
Dietetics,
or
M. A. Home-Science.
- Nature of Question paper** : As per Shivaji University.

Standard of passing : As per Shivaji University Norms.

Structure Syllabus for Pre. Ph. D. in Home Science

Papers No. 1 and 2 are compulsory

Paper No. 3 is elective

Sr. No.	Paper No.	Title of the Paper	Total Marks
1	Paper I : (compulsory)	Research Methodology	100
2	Paper II : (compulsory)	Advanced Studies in Home-Science	100
3	Paper III : (Elective)	Any one among the following	100
		i) Thrust areas for research in Food and Nutrition. ii) Thrust areas for research in Family Resource Management. iii) Thrust areas for research in Human Development iv) Thrust areas for research in Textile and clothing v) Thrust areas for research in Home- Science Extension Education.	

Shivaji University, Kolhapur
Syllabus for Pre. Ph.D. in Home Science
Paper I - Research Methodology (compulsory)

Mark - 100

Objectives :

To enable Students to

1. Understand meaning, process and importance of Research in Home-Science.
2. Select Problem tools and methods for conducting research.
3. Interpret data manually as well as on computers.
4. Develop inclination in preparing report as well as project proposals.
5. Understand application of statistics in research.
6. Motivate for the use of computers in Research for Home Science.

Unit - I

- a) Meaning and concept of Research.
- b) Importance, characteristics and objective of Home-Science.
- c) Role of research in different areas of Home-Science.
- d) Qualities of good researcher.
- e) Essential steps in Research process.
- f) Meaning, Functions, Types and formulation of Hypothesis.

Unit - II

- a. Types of research design : Historical, case study, survey, food survey, field studies and experiments, observation, experiments in vivo and invitro, evaluation and action research, organoleptic or sensory evaluation methods. Difference between applied and pure research.
- b. Pilot studies : Meaning, concept, importance, organization, implementation and analysis of findings.
- c. Sampling Techniques : Characteristics of good sample concepts of simple Random Sampling, stratified sampling, systematic sampling, cluster sampling, Quota sampling.

Unit III :

- a) Tools of Research - Interview, questionnaire, schedule methods, Techniques of scale measurements,
- b) Scaling Techniques - Types of Scales - Normal, ordinal interval and ratio, scales, steps in construction of scales, Reliability and validity of scales.

Unit - IV

Preparation of project proposals and scientific report writing : Formulation of research topic, Title, Importance, Objectives, Reviews of Literature, ;Variables (Types), Methodology, Time schedule and Budget estimate. Funding agencies for research projects. Process of writing a research article in research journal for the publication.

Unit - V

- a) Measures of Central Tendency - Mean, Median and Mode.
- b) Measures of Dispersion - Quartile deviation, standard deviation, and their relative measures.
- c) Correlation : Concept of Correlation, Scatter diagram method, Karl pearson's correlation coefficient.

Unit - VI

Probability and Probability distributions - Concept of Probability, Laws of Probability : Normal distribution and related examples.

Unit - VII

Hypothesis Testing - Concept of population, sample, Parameter, Statistic, Hypothesis, one tailed and two tailed tests. Errors in testing of Hypothesis, Critical Region, Level of significance.

- a) Large Sample Tests -
 - i) Test of population mean.
 - ii) Test of equality two population means.
 - iii) Test of equality of two population proportions.
- b) Small Sample Test -
 - i) Chi-square test : Test of independence of Attributes and test of population Variance.
 - ii) Student's 't' Test and 'Z' tests : Test of population mean, equality of two means and test of population correlation coefficient.
 - iii) Analysis of Variance - one way and two-way classification.

Unit - VIII

Computer Application - working with MS-word and Excel, formatting document and text, designing tables and graphs for research purpose. Use of various statistical functions like, average, sum, standard deviation, correlation. Slides preparation for power point presentation.

References:

- | | |
|---|--|
| 1. Research methods | S. R. Gupta. |
| 2. Hand book of Research Methodology | R. P. Devdas and K. Kulandaivel. |
| 3. Research Methodology | C. R. Kothari. |
| 4. Scientific Report Writing | P. O. Ingale. |
| 5. Thesis Writing - Some Guidelines | S. Y. Kulkarni and Vandan. Mohod. |
| 6. Guide to Thesis Writing | R. Kamath and S. Udipi. |
| 7. Statistical procedures for agricultural research | K. A. Gomez and A. A. Gomez, Willily International, John Willeye sons, 1984. |
| 8. Probability Theory and mathematical statistics | V. K. Rohatgi. |
| 9. Fundamentals of Statistics Vol I and II | Goon, Gupta Dasgupta. |
| 10. Theory and Analysis of Sample survey | Darogasingh. |

11. Fundamentals of Mathematical Statistics S. C. Gupta & V. K. Kapoor.
12. Statistics in psychology and Education H. E. Garret.
13. Research Methodology R. P. Misra.
14. Statistics by Panse and Sukhatme

Shivaji University, Kolhapur
Paper II : Advanced Studies in Home-Science (compulsory)

Total Marks : 100

Objectives :

- 1) To understand the advanced aspects in Home-Science.
- 2) To recognise the role of advanced studies in various areas of Home-Science.
- 3) To acquaint with recent advances in the field of Home-Science.

Unit I :

- a) Studies of traditional and novel foods in India, value added foods, non nutritive foods.
- b) Processing technology of foods and nutritional implication for cereals, pulses, oilseeds, fruits and vegetables, milk, meat, fish and eggs.

Unit II :

Impact of environment, on Health and Nutritional status of the community. Food allergy, food safety and security, Food adulteration, Food spoilage, Food distribution system.

Unit III :

Consumer ergonomics- Application of ergonomics in family environment, people with special needs, design or various work stations, equipments and furniture's finishes.

Unit IV :

New trends in Interior space Designing - Material used in interior, surface treatments for various purposes (walls, ceilings, windows and window treatments, Furniture finishes)

Unit V :

Problems during different stages of life cycle i.e. childhood, adolescence, adulthood and old age, problems : physical, behavioral, psychological and social.

Unit VI :

Early childhood education and care centers : crèches, anganwadi, daycare, play schools, Kinder gardens, schools for special children, child welfare organisations i.e. CRY, UNICEF. Government policies for child welfare, NGO's working for child welfare.

Unit VII :

New developments in fibre, manufacturing in India. i.e. bi component, bio-constituent and special purpose fibres. i.e. heat, water, crease, fire, fungal resistance fibres.

Unit VIII :

Entrepreneurship development in women through Home Science education, policies and programmes for development of women entrepreneurs.

Reference books recommended :

- 1) Food, Nutrition and Health by Vijaya Khader Kalyani Publishing House, Ludhyana.
- 2) Essentials of food and Nutrition by M. Swaminathan, Vol II. The Bangalore printing and publishing co. Ltd. No. 88 My sore road, Bangalore 560 018.
- 3) Food Science by Norman N. Potter, Joseph H. Hotchkiss, V Edi. CBS publisher and Distributors, 4596/1A, 11, Dariaganj, New Delhi - 110 002.
- 4) Management for Modern Families by Gross Creadoll and Knoll.
- 5) Ergonomics at Work by Osborne David, John Willey and Sons, Chickester, London.
- 6) Early Childhood Care and Education by V. K. Khurshid Al. Eslam.
- 7) Ergonomics Design for People at Work. Eastman Kodak Company, Vol. I and II.
- 8) Ergonomics of the Home, Grandjeans Elienns.
- 9) Body Space, Antropometry, Ergonomics and the design of the work, Pheasant Stephan.
- 10) The Art of Interior Design, Bau, Victoriak 1655.
- 11) Foundation of Arts Design. Bhatt P.D., Goenkas.
- 12) Encyclopadia of Interior Design.
- 13) Child Development by J. N. Vyas.
- 14) Handbook of Fibre Science and Technology - by lewin M. and sello, Stephen V. Vol. II.
- 15) Handbook of Textile Fibres and Man made Fibres by Cook. J. Gorden, Merrow publishing Ltd. England.
- 16) Entrepreneurship for Women in India by Akhauri M. M. P. 1990, Publishing -
- 17) NESBV, New Delhi.
- 18) Women and Empowerment : Approaches and Strategies by Sahay, S. Discovery Publishing House New Delhi.
- 19) Empowerment of Women by Yadav, C. P. Laxmi Sansthan Publishing Anmol New Delhi.
- 20) Community Development - by Govt. of India.

Shivaji University, Kolhapur.

Syllabus for pre. Ph.D. in Home Science

Optional Paper no. 1: Thrust areas for Research in Food and Nutrition

- Unit I :** Formulation of value added and indigenous foods with its evaluation, its efficacy to the community with special reference to vulnerable groups.
- Unit II :** Nutrition Education: Types, assessment, application to improve Health and Nutritional status of the society KAP.
- Unit III :** Processed Foods, its impact on nutrient content, effects on health, evaluation of storage stability of processed foods, food adulteration act and law, its application to the community health.
- Unit IV :** Assessment of food quality control, food safety and physico-chemical properties of newly developed varieties of foods, Food analysis methods .
- Unit V :** Application and evaluation of special dietary treatment in specific diseases cardiovascular, diabetes mellitus, kidney, gastrointestinal (diarrhea, constipation), under nutrition, over nutrition, liver disease, HIV/AIDS.
- VI :** Formulation, preparation and evaluation of space foods, foods for sports, enteral and parenteral food formulae, role of antioxidant in promotion of health status.
- Unit VII :** Estimation of protein fat, vitamins minerals and dietary fibres. Nutrition related enzymes and hormones. Methods for evaluation of nutrient metabolism.
- Unit VIII :** Concept of nutrigenomics, GM Foods and nutraceuticals Nutrition role of inborn error of metabolism. Nutrition in cellular management. Ministries in Food and Nutrition, and their policies.

References :

- The Complete Health Food Guide - By Robert Morse, N.D.
- Hygiene and Health by Ahmed M.N.
- Cancer free life of Women by Meenal Kumar and R. Kumar
- Wellness and Well being by R. Kumar and Meenal Kumar.
- Prevention of Heart disease and healthy life By R. Kumar and Meenal Kumar.
- Food and Nutrition by Educational Planning Group Delhi.
- Health and Food by William H. Hay.
- Biochemistry by U. Satyanarayan
- Food Science by Norman N. Potter, Joseph H. Hotchkiss.
- Food Nutrition and Health by Vijaya Khader
- Essential of Food and Nutrition by M. Swaminathan.

Optional Paper No. - II

Thrust areas for research in family Resource Management

- Unit 1:** Impact of socio-economic environment on family and community.
- Unit 2:** Management of eco-system - environmental pollution and community health.
- Unit 3:** Consumer issues - Impact of Globalization, Privatisation and Industrialisation on consumer and consumer goods.
- Unit 4:** Equipment Designing - Effect on work, body posture and safety of equipment.
- Unit 5:** Environmental issues - women and environment.
- Unit 6:** Fuel technologies and use of nonconventional energy resources.

Unit 7: Manpower management and Auditing of Human Resources.

Unit 8: Housing Research - Housing conditions, needs and problems in India.

Agencies for housing research and development, methods and techniques.

Ministries in family resource management and their policies.

References :

- 1) Chandha R. : The Emerging consumer
- 2) Seetharaman, P and Seth, M. : consumerism : A Growing Concept.
- 3) Pheasant Stephen : Body space, Anthropometry, ergonomics and the design of work.
- 4) Vegas, Philip and Meanon, Geeta : The impact of Environmental Degradation on people.
- 5) Trivedy, R. K. and Arvind Kumar : Eco-Technology for pollution control and Environmental management.
- 6) Deshpande, R. S. : Modern Ideal House for India.
- 7) Ambedkar, V. N. & Modak, N. V. : Town and Courtly Planning and Houring.
- 8) Publication of Houring Board.
- 9) Jain, H. C. : Non-conventional sowrces of energy.
- 10) Deshpande, B. G. : The world of petnoleum.

Optional Paper No. - III
Thrust Areas for research in Human Development

Unit : 1. Early Childhood care and Education - Emerging trends.

Unit : 2. Development problems and disabilities during childhood and adolescence, Guidance and counseling.

Unit : 3. Gender discrimination and its impact on child development.

Unit : 4. Child Domestic accidents - causes, consequences and remedies.

Unit : 5. Development Intervention for children with special reference to juvenile delinquency, child labour problems.

Unit : 6. Family - its role, importance and contribution in child development, family disorganization.

Unit : 7. Impact of technology on human development.

Unit : 8. Recent approaches - women studies, family welfare programmes. Related Ministries and policies.

Reference

Human Development

- | | | |
|-----|--|--|
| 1. | Early Childhood Care and Education | S. Khurshid-UL-Islam V. K. Rao |
| 2. | Integrated Approach to Human Development An Introduction | Dr. Rekha Sapra Vishvabharati Publishers, New Delhi. (2007) |
| 3. | Family Relationship and child Development | R. K. Arora Murlial and sons New Delhi - (2006) |
| 4. | Child Development and Disability and Assessment | Prachi Kanhai Commonwealth New Delhi (2001) |
| 5. | Adolescent Girls - Social needs and psycho social problems | R. K. Choudhary J. M. Choudhary National Publishing House, Jaipur (2008) |
| 6. | Human Development | Diane F. Papalia Sally Nendkop old, Tata McGrow Hill Publishing Company (2004) |
| 7. | Child Development and Family Relationship | Dr. Veena Sharma Research Publication Jaipur. |
| 8. | Managivp Childhood Problems- Support, Strategies and Interventions | G. Norayana Reddy Suma Narayan Reddy, Kanishka Publishers, Distributrs, New Delhi (2003) |
| 9. | Child Development | Sarla Grover Printwell Publishers, Jaipur |
| 10. | Psychology and child Development | S. R. Sharma, Pointer Publishers |
| 11. | Handbook of Research in Early Childhood Development | Spodek B. |
| 12. | Children in India : Issues in Human Development | Dsouza, A. (1979) Manohar Publisher |
| 13. | Relationshipy in Marriage and Family | Stinnett and Walterd |
| 14. | Child Development | Dr. J. N. Vyas Medi Norld Press Bikaner (1994) |

Optional Paper No. IV
Thrust Areas for Research in Textile and Clothing

Unit : 1. Eco friendly and bio-degradable textiles

Unit : 2. Textile conservation - Handloom Weaving and Natural dyeing and printing.

Unit : 3. Physical and chemical assessment of textile materials.

Unit : 4. Textile and garment industries - structure, functions and policies.

Unit : 5. Functional clothing, traditional textiles, clothing and embroideries and its application.

Unit : 6. Fashion and apparel designing.

Unit : 7. Computer Aided Textile Designing and Fashion Designing.

Unit : 8. Value addition, Entrepreneurship development in Textile, Clothing and Fashion designing, Ministry and Policies.

References :

- Billie, J. Colier and Helen H. Epps. Textile Testing and Analysis, Preice Hall, New Jercey.
- Booth, J.E. : Principles of Textile Testing, Newness Butter Worth, London.
- John, H. Skinikie – Textile Testing.
- Shenai V.A. : Ecology and Textile, Sevak Publication.
- Shenai V.A. : Toxicity of dyes and intermediates.
- Shenai V.A. : Azo dyes – Facts and figures
- Veisinet, D.D. : Computer aided drafting and design, Concept and Application
- Aidrich, W.: CAD in clothing and textile
- Stone: Sample fashion merchandising, McGraw Publishing house.
- National Textile Policy, 2000.
- Subhodh Kumar Aggarwal – Textile Processing and Auxiliaries.
- Kulkarni M.M. : Weaving Technology, Vrinda Publication, Jalgaon.
- Amalsar, D.M. : Handloom weaving
- Amalsar, D.M. : Fabric structure and cloth analysis.
- Aswari, K.T. : Weaving mechanism, Ahmedabad.

**Optional Paper No. V :
Thrust Areas for Research in Home Science Extension Education**

Unit :1. Self Help Group (SHG) and rural development with special reference to social and economic development. Women empowerment through SHG.

Unit :2. Local organizations and rural development i.e. Anganwadi, PHC, Panchayat raj system. Co-operative society, Mahila Mandal, Krishi Vikas Kendra. Its participation and Assessment.

Unit :3. Evaluation of Extension Education Programmes / Schemes - related to Home Science.

Unit :4. Dynamics of communication application in Home Science research. Use of audio-visual aids in communication.

Unit :5. Government policies, and programmes for development of women entrepreneur. Self employment and Entrepreneurship development through Home Science education.

Unit :6. Gender discrimination and its impact on community development.

Unit :7. Programmes for rural / community development – Gram Swachnata Abhiyan and Nirmal gram yojana, Kanya Bachav Mohim.

Unit :8. Disaster Management - Natural and Manmade calamities, its management.

References:

- | | | |
|-----|---|--|
| 1. | Textbook Extension Education | Dr. S. V. Supe |
| 2. | Extension and community Development | Directorate of Extension Govt. of India, New Delhi |
| 3. | Extension and Rural Development | O. P. Dhama |
| 4. | Extension Education for Community Development | Dhama O.P. and Bhatnagar |
| 5. | Extension Communication and Management | Ray. |
| 6. | Rural Sociology | Samat |
| 7. | Rural Social organisation | Sandadron. |
| 8. | Co. op. Extension work | Kelse A Hearue. |
| 9. | Extension Education | Ranjeet Singh. |
| 10. | Hand Book of Extension Education | Choube |
| 11. | Social Change in Rural Sociology | Rogers |
| 12. | कृषी विस्तार शिक्षण | डॉ; वाय.बी. जोशी |
| 13. | विस्तार शिक्षण | आर. टी. देशमुख |