



પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં આચાર્યશ્રીઓને સવિનય જણાવવાનું કે સાયન્સ વિદ્યાશાખા હેઠળનો હોમ સાયન્સ વિષયનો એમ.એસ.સી પ્રોગ્રામનો સેમેસ્ટર-૧ અને સેમેસ્ટર-૨ નો અભ્યાસક્રમ આ સાથે સામેલ છે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૩થી અમલવારી કરવાની રહે છે. સાયન્સ વિદ્યાશાખાનાં હોમ સાયન્સ વિષયનાં પી.જી.નો અભ્યાસક્રમ ચલાવતી તમામ સંલગ્ન કોલેજોનાં પી.જી.સેન્ટર ધ્વારા તેની અમલવારી કરવા જણાવવામાં આવે છે.



[Signature]
તારીખ ૦૧/૦૯/૨૦૨૪
ખાસ ફરજ પરના અધિકારી
(એકેડેમિક)

ક્રમાંક/બીકેએનએમયુ/એકેડેમિક/૨૨૮/૨૦૨૪

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,

સરકારી પોલીટેકનિક કેમ્પસ,

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,

ખડીયા, જૂનાગઢ-૩૬૨૨૬૩

તા.૧૭/૦૧/૨૦૨૪

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી સંલગ્ન સાયન્સ વિદ્યાશાખાનાં પી.જી.(હોમ સાયન્સ)નાં અભ્યાસક્રમો ચલાવતી તમામ કોલેજોના આચાર્યશ્રીઓ તરફ....

નકલ સાદર રવાના:-

- માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

સીસ્ટમ મેનેજરશ્રી, આઈ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)



Bhakta Kavi Narsinh Mehta University Junagadh



BOARD OF HOME SCIENCE STUDIES
FACULTY OF SCIENCE
SYLLABUS FOR
MASTER OF SCIENCE PROGRAMME
(SEMESTER-I, II)
EFFECTIVE FROM JUNE, 2023

M.Sc. HOME SCIENCE

Syllabus

General Home Science

The specialists in Home science play a vital role in promoting the quality of life of individuals and communities, which contributes significantly to the economic and overall development of the nation. This is achieved through a blend of academics, research training and extension as well as industrial applications. The post graduate programme in this discipline has been designed to provide the students with intensive and extensive theoretical and experiential learning. The programme allows flexibility in the choice of thrust areas, which students can select, based on their career goals. It is envisaged that the current scenario at the regional and national level require trained professionals in areas such Clinical and Therapeutic Nutrition, Extension Management, Apparel Design and Construction, Child and Human Rights, Nutrition for Health and Fitness, Fashion Design.

Aim of the Course

The curriculum integrating several elective courses, besides the core, has been formulated to provide professionally competent manpower for

- a. Academic and research activities
- b. Hospitals, food service institutions and industries
- c. Managerial roles in agencies and institutions both Government and NGO sector.
- d. Planning, monitoring and evaluation of nutrition and health programmes
- e. Training and IEC activities of regional and national programmes
- f. Ensuring food safety and quality for consumers
- g. Entrepreneurial ventures
- h. Advocacy and consultancy

Eligibility for Admission

The candidates should have completed General Home Science/CD/CT/EDEX/FN/ Home Management at B.Sc. level with a minimum percentage of marks decided by the University time to time. Candidate having B.Sc. with Foods& Nutrition will not entitle to get admission.

Note: It is a full time degree course and therefore cannot run part time or as external. The contact hour is **minimum five hours including practical per week** should be given to the student if it is run by the P. G. Department or any other centre. A total of 96 credits have to be taken by the students to complete the programme. If the number of credits exceeds 96, it permissible, but the calculation of the grade point average will be done on the basis of 96 credits only.

DURATION OF THE COURSE

Two years Courses: The duration of the course is for two academic years consisting of four semesters.

EXAMINATIONS

There shall be four semester examinations: first semester examinations at the middle of the first academic year and the second semester examination at the end of the first academic year. Similarly, the third and fourth semester examinations shall be held at the middle and the end of the second academic year, respectively. The courses are divided into two parts among one is internal consists of 30 marks for core, skill oriented and multidisciplinary courses and 15 marks for elective courses and external consists of 70 marks for core, skill oriented and multidisciplinary courses and 35 marks for elective courses. Internal marks are further divided into three parts among one is MCQ test of 10 marks for CC, MD and SO while 5 marks for elective which is conducted during middle and end of each semester and average of two is consider as a final score. 10 mark of assignment for CC, MD and SO while 5 marks for elective. 10 mark of seminar for CC, MD and SO while 5 marks for elective. Course contain practical works is exempted from seminar.

PATTERN OF QUESTION PAPER: For theory

For 4 credit course, question paper will be of 2.5 hours duration.

Question paper will contain total six questions.

Question No-1 or Question No. 1 will be compulsory and objective type.

Students will have to attempt any three questions from the rest of the questions.

All Questions will carry equal grades.

For 2 credit course, question paper will be of 1.5 hours duration.

Question paper will contain total four questions.

Question No-1 or Question No. 1 will be compulsory and objective type.

Students will have to attempt any two questions from the rest of the questions.

All Questions will carry equal grades.

For practical

For practical examination, a skeleton will be designed and given to examiner every year. The duration of examination is five hours. Passing standard is 40 %.

- BHAKT KAVI NARSINH MEHTA UNIVERSITY, JUNAGADH - EXAMINATION CODING SYSTEM - M.Sc. HOME SCIENCE - SEMESTER – 1							ANNEXURE 'A'					
Sem. – 1												
Core Courses	Course Code	Subject	T/P	Credit	Contact Hrs/Week	Exam Duration in Hrs	Marks					
							Internal		External		Total	
							Total	Passing	Total	Passing	Total	Passing
M.D.	MD1	RESEARCH METHODS	T	4	4	2.5	30	12	70	28	100	40
CORE COURSE	CC-1T	PROCESS OF EXTENSION MANAGEMENT	T	4	4	2.5	30	12	70	28	100	40
	CC-1P	PROCESS OF EXTENSION MANAGEMENT	P	2	4	5	0	0	50	20	50	20
	CC-2T	ENTREPRENEURSHIP & MARKETING	T	4	4	2.5	30	12	70	28	100	40
	CC-2P	ENTREPRENEURSHIP & MARKETING	P	2	4	5	0	0	50	20	50	20
	CC-3T	THERAPEUTIC NUTRITION	T	4	4	2.5	30	12	70	28	100	40
	CC-3P	THERAPEUTIC NUTRITION	P	2	4	5	0	0	50	20	50	20
ELECTIVE (ANY ONE)												
ELECTIVE - 1	E-1T	NUTRITION DURING PREGNANCY AND LACTATION	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 2	E-2T	PRINCIPLES OF INTERIOR DECORATION	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 3	E-3T	DEVELOPMENT PROCESS IN GENDER	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 4	E-4T	TEXTILE TECHNOLOGY	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 5	E-5T	RURAL DEVELOPMENT	T	2	2	1.5	15	06	35	14	50	20
TOTAL							135		465		600	

CC=Core Course MD= Multi Disciplinary E = Elective

- BHAKT KAVI NARSINH MEHTA UNIVERSITY, JUNAGADH - EXAMINATION CODING SYSTEM - M.Sc. (HOME SCIENCE) - SEMESTER – 1												ANNEXURE ‘B’
Sem. – 1												
Core Courses	Course Code	Subject	T/P	Credit	Paper No.	Paper Code	Marks					
							Internal		External		Total	
							Total	Passing	Total	Passing	Total	Passing
M.D.	MD1	RESEARCH METHODS	T	4	P-1	MHS1rm0MD010	30	12	70	28	100	40
CORE COURSE	CC-1T	PROCESS OF EXTENSION MANAGEMENT	T	4	P-2	MHS1pemC0120	30	12	70	28	100	40
	CC-1P	PROCESS OF EXTENSION MANAGEMENT	P	2		----	0	0	50	20	50	20
	CC-2T	ENTREPRENEURSHIP & MARKETING	T	4	P-3	MHS1em0C0230	30	12	70	28	100	40
	CC-2P	ENTREPRENEURSHIP & MARKETING	P	2		-----	0	0	50	20	50	20
	CC-3T	THERAPEUTIC NUTRITION	T	4	P-4	MHS1tn0C0340	30	12	70	28	100	40
	CC-3P	THERAPEUTIC NUTRITION	P	2		-----	0	0	50	20	50	20
ELECTIVE (ANY ONE)												
ELECTIVE - 1	E-1T	NUTRITION DURING PREGNANCY AND LACTATION	T	2	P-5	MHS1nplE0051	15	06	35	14	50	20
ELECTIVE - 2	E-2T	PRINCIPLES OF INTERIOR DECORATION	T	2		MHS1pidE0052	15	06	35	14	50	20
ELECTIVE - 3	E-3T	DEVELOPMENT PROCESS IN GENDER	T	2		MHS1dpgE0053	15	06	35	14	50	20
ELECTIVE - 4	E-4T	TEXTILE TECHNOLOGY	T	2		MHS1tt0E0054	15	06	35	14	50	20
ELECTIVE - 5	E-5T	RURAL DEVELOPMENT	T	2		MHS1rd0E0055	15	06	35	14	50	20
TOTAL				24			135		465		600	

M. Sc. (HOME SCIENCE) SEMESTER – I
RESEARCH METHODS - PAPER NO.1
MD - MHS1rm0MD010
(CREDITS: THEORY – 4, PRACTICAL – 0, TOTAL – 4)

Objectives

- To understand the significance of statistics and research methodology in Home Science research
- To understand the types, tools and methods of research and develop the ability to construct data gathering instruments appropriate to the research design.
- To understand and apply the appropriate statistical techniques for the measurement scale and design

Unit I: Research- Meaning, purpose and approaches

- Exploration, Description, Explanation
- Scientific method and research
- Research Designs –Experimental and Observational
- Quantitative and Qualitative approaches
- Units of analysis

Unit II: Sampling & Tools

- Role of sampling in research
- Types of sampling
- Research Tools and Techniques
- Interviewing and observational methods

Unit III: The Research Process

- Defining the problem, research questions, objectives, hypotheses
- Review of related literature and originality in writing
- Planning the research
- Subjects context and ethics
- Citation formats: in medical sciences, social sciences

Unit IV: Types of Research Tools (Qualitative and Quantitative)

- Focus Group Discussion
- Case studies
- Observations-Direct, Spot observations
- Body mapping
- Free listing
- Narrations
- In depth interview

Unit V: Ethics and Politics of Research

- Identify, define, and analyze ethical issues in the context of human subject research.
- Reasons for conducting ethical review of research, theories and concepts related to ethical decision-making including consequentialism, deontology, respect, dignity, discourse ethics, communitarianism, liberalism and the four principles approach.
- Ethical importance of consent, privacy and confidentiality in research
- Issues of academic fraud and plagiarism, conflicts of interest, authorship and publication

RECOMMENDED READINGS

- Agrawal C. , Joshi S.P. and Sinha A. : Communication Research and development, The ISRO Experience, New Delhi, Nawray Rai concept Pub. Co.
- Beaglehole R, Bonita R and Kjellstrom T (1993). Basic Epidemiology. World Health Organization, Geneva.
- Best J. (1959) : Research in education. Englewood, Cliffs. New Jersey Prentice Hall Inc.
- Bhattacharya DK (2004). Research Methodology. Published by Anurag Jain for Excel Books, New Delhi, India
- Biderman A. and Drury T. (1976) : Measuring work and Quality for social reporting New York, John Wiley and Sons.
- Brown F. (1988) : Statistics for Behavioural Science, Boston, Allyn and Barm Inc. Century Gofes
- Fowler FJ (2001). Survey Research Methods (3rd ed.). Sage Publications, Newbury Park
- God V. Caite (1972) : Essentials of Educational Research Methodology and
- Good C.N. (1963) : Introduction to Educational research, New York, Appleton
- Gupta S.C. and Kapodi V.R. (1990) : Fundamentals of Applied Statistics, New
- Hinton P (2004). Statistics Explained: A Guide for Social Science Students. Routledge Publishing, London
- Kaul L. (1980) : Methodology of Educational Research, Vani educational books, Vikas Pub., New Delhi.
- Kenneth King. (1978) : Final report Literacy Research in developing countries -
- Kerlinger F.N. (1965) : Foundations of Behavioural Research, N., Holt Rinehart and Winston Inc.
- Kothari C R (2008). Research Methodology: Methods and Techniques (2nd ed.). New Age International Publishers, New Delhi, India. Ltd., Ramnagar, Delhi.
- Methodology of Research in Education – Publishing Sidhu Sterling Publishers Pvt.Ltd. New Delhi.
- Monly C.J. (1964) : The Science of Educational Research, Einaasia Pub. House
- Patton Q.M. (1990) : Qualitative evaluation and Research methods, Sage Pub.,
- Ratnapala N. (1993) : New Horizons in Research methodology, Sri Lanka,
- Rolvert Horndike (1977) : Measurement & Evaluation in Psychology & Education. 4th ed.
- Singh A.K. (1986) : Tests, Measurement and Research Methods in Behavioral
- Sproull N (2003). Handbook of Social Research Methods: A Guide for Practitioners and Students in the Social Sciences. The Scarecrow Press, Inc., New Jersey
- Wandt Edwin (1968) : A cross section of educational Research, David McKay workshop on education research with special research on literacy. Geneva

M. Sc. (HOME SCIENCE) SEMESTER – I
PROCESS OF EXTENSION MANAGEMENT - PAPER NO.02
CC- 1 - MHS1pemC0120
(CREDITS: THEORY – 4, PRACTICAL – 2, TOTAL – 6)

Objectives

- Understand the concepts and process of management.
- Realize the importance of management for achieving organizational goals.
- Apply the principles of management to the management of extension organizations / services.

UNIT;- 1 Concept of Extension Management

- Definition, nature and process and need
- Models and principles of extension management

UNIT:- 2 Steps in Extension Management:

- Planning – Meaning and characteristics – elements, policies, strategies, procedures, rules, budgets – planning process, types of plan – Decision making: meaning – forecasting and decision making – decision making under uncertainty.
- Organizing – organizational structure – organizational chart – organizational relationship – formal and informal organization – span of management – scalar principle, departmentation – line staff – functional committee – delegation of authority – principles of delegation – authority and responsibility – centralization and decentralization.
- Co-ordination – meaning, objectives, linkage mechanisms – involvement of organizations at local level–non-profit & profit making organizations.
- Staffing – meaning, manpower planning, selection – training and development needs – methods performance appraisal, organizational conflict and conflict resolution, grievance handling.

UNIT:-3 Steps in Extension Management

- Directing – methods – motivation – theories. Communication: Importance, types and barriers to communication. Leadership: theories and styles – managerial grid.
- Controlling – meaning and process of control – management Control Techniques – budgetary and non-budgetary control – Modern techniques – PERT, CPM, requirements for effective control system.
- Monitoring and evaluation – meaning, purpose and differences. Types of evaluation, steps in evaluation, efficiency cum performance audit, reporting.

PRACTICALS:-

- (1) Manage extension programs and write evaluation reports
- (2) Develop a strategy of replication and use the Media
- (3) Get information
- 1- LCD projector
- 2- Video recording
- 3- Photography
- 4- Film projector
- (4) Display Boards -- Whiteboards, Electronic Marker Boards

RECOMMENDED READINGS:-

1. Barger, A. A. (1991): Script Writing for Radio and Television, Sage Publication.
2. Berdeek (1946): Making the Movies, Paul Eiek Halton Garden, London.
3. Brown et al. (1983): A. V. Instruction Technology. Media & Methods. 6th Ed., McGraw Hill Book Co., New York.
4. Brown J.W. (1977): Educational Media Year Book.
5. Dale (1964): Audio-Visual Methods of Teaching. Holt, Rinhart and Winston, London.
6. Banerjee, S. (1981). Principles and Practice of Management. Oxford and IBH Publishing Company, New Delhi.
7. Basu, C.R. (1989). Organisation and Management S. Chand & Co. Ltd., New Delhi.
8. Burton, Gene and Hanab Thakar (1997). Management Today. Tata McGraw Hill Publishing Company, New Delhi.
9. Chandan, J. S. (1997). Management – Concepts and Strategies. Vikas Publishing House ; New Delhi.
10. Koontz and Heinz Weihrich (1990) Essentials of Management. McGraw-Hill; New Delhi.
11. Prasad, M.L. (1999). Principles and Practice of Management. Sultan Chand & Sons, New Delhi.
12. Ramasamy, T. Principles of Management. Himalaya Publishing House, Mumbai.
13. Rao, V.S.P. and Narayana, P.S. (1987). Principles and Practice of Management. Konark Publishing Private Limited, New Delhi.
14. Tripathi, P.C. and Reddy, P.N. (1993). Principles of Management: Tata McGraw Hill, New Delhi.
15. Rajpura M R (2002) “communication Media’ (Booklet) Shree U K V Mahila Arts & Home Science College Keshod.
16. Rajpura.,M.R(2004).Gruh Vigyan Vistaran ane Pratyayan.Rajkot:Pravin Prakashan.Gujarat

M. Sc. (HOME SCIENCE) SEMESTER – I
ENTREPRENEURSHIP & MARKETING - PAPER NO.03
CC- 2 - MHS1em0C0230
(CREDITS: THEORY – 4, PRACTICAL – 2, TOTAL – 6)

Objectives

- To provide conceptual inputs regarding entrepreneurship management.
- To sensitize and motivate the students towards entrepreneurship management.
- To orient and impart knowledge towards identifying and implementing entrepreneurship opportunities.
- To develop management skills for entrepreneurship management.
- To become aware of different market organizations in our economy.
- To understand the different marketing functions and the distribution system in our economy.
- To familiarize with the marketing strategies and market research.

UNIT- 1. Conceptual Framework

- Concept need and process in entrepreneurship development.
- Types of enterprise – Merits and Demerits
- Concept of marketing

UNIT- 2. The Entrepreneur

- Developing Entrepreneurial competencies
- requirements and understanding the process of Entrepreneurship development, self awareness, interpersonal skills, creativity, assertiveness, achievement, factors affecting Entrepreneur's role

UNIT- 3. Launching and organizing an enterprise

- Environment scanning – information, sources, schemes of assistance, problems.
- Enterprise selection, market assessment, enterprise feasibility study, SWOT Analysis
- Resource mobilization – finance, technology, raw material, site and manpower
- Costing and marketing management and quality control.
- Feedback, monitoring and evaluation.

UNIT-4. Product development and forecasting

- Developing, testing and launching new products
- Idea generation, screening and business analysis
- Understanding market demand and consumer adoption process.
- Labeling and packing.
- Stages in product life cycles

UNIT- 5. Pricing practices and consumer interest pricing.

UNIT-6. Advertising, sales Promotion and management

- Advertising objectives, functions, benefits
- Advertising budget and costs of sales promotion
- Types of advertising
- Evaluating of advertising effectiveness

PRACTICALS;-

1. Preparation of various types of advertisement for eg. News paper, leaflets, magazines, hording boards,
2. Collect the information of financial and other assistance from various government agencies to start new entrepreneurial business unit
3. Interview any one women entrepreneur and study the same business unit and study: Entrepreneurship and Marketing Management Practices

RECOMMENDED READINGS;-

1. Meredith, G. G. et al. (1982): Practice of Entrepreneurship, ILO, Geneva.
2. Patel, V.C. (1987): Women Entrepreneurship-Developing, New Entrepreneurs, Ahmedabad EDII.
3. Akhauri, M.M.P. (1990): Entrepreneurship for Women in India, NIESBUD, New Delhi.
4. Hisrich, R.D. and Peters, M.P. (1995): Entrepreneurship – Starting, Developing and Managing a New Enterprise, Richard D., Irwin, INC, USA.
5. Hisrich, R.D. and Brush, C.G. (1986). The Women Entrepreneurs, D.C. Heath & Co., Toronto.
6. Barolia, G.R. & Sharma N.K. (1998). Effective Advertising. Marketing and Sales Management, mangaldeep Publications, Jaipur.
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9. Kotler, Philip. (1983). Marketing management. Analysis, Planning and Control, Prentice Hall Ltd., New Delhi.
10. Schillman G. Leon, Kauk Lazer Lesha (1992): Consumer Behaviour, Prentice hall of India, New Delhi.
11. Zikmund, G. William & Michael Daunico (1996). Basic Marketing West Publishing Co.

M. Sc. (HOME SCIENCE) SEMESTER – I
THERAPEUTIC NUTRITION - PAPER NO.04
CC- 3 - MHS1tn0C0340
(CREDITS: THEORY – 4, PRACTICAL – 2, TOTAL – 6)

Objectives:

This Course will enable students to:

- Understand the etiology, Physiologic and Metabolic Anomalies of acute and chronic Diseases and patient needs.
- Know the effect of the various diseases on nutritional status and nutritional and dietary Requirements.
- Be able to recommend and provide appropriate nutritional care for prevention / and Treatment of the various diseases.

UNIT-1. Obtaining medical and dietary history of patients

UNIT-2. Nutritional support – Techniques and Feeding substrates – tube feeding, Intra venous feeding

UNIT-3. Etiopathophysiology, metabolic and clinical aberrations, complications, prevention and recent advances in the medical nutritional management of

- Cardio vascular disorders
- Diabetes mellitus and other metabolic disorders.
- Liver and gall bladder, Pancreatic disorders
- Renal disorders
- Stress and trauma
- Cancer
- Infection AIDS
- Respiratory problems

Practical

1. Market survey of commercial nutritional supplements and nutritional support substrates.
2. Interpretation of patient data and diagnostic tests and drawing up of patient diet Prescription, using a case study approach. Follow-up acceptability of diet prescription Compliance; discharge diet, plan for cardiovascular disease diabetes. Liver, Renal Diseases.
3. Preparation of diet counseling aids for common disorders.
4. Planning and preparation of diets for patients with common multiple disorders and Complications and discharge diet plans.

RECOMMENDED READINGS:-

1. Dave, Nilambari (2004). Nutrition and Diet Therapy, 1st Edition, Dr. Nilambari Dave, Head, Dept. of Home Science, Saurashtra University, Rajkot.
2. Mahan, L.K. and Escott-stump S. (2000): Krause's food nutrition and diet therapy, 10th Edition, W.B. Saunders Ltd.,
3. Shills, M.E. Olson, J.A. Shilke, M. and Ross. A.C. (1999). Modern in Health and Disease, 9th Edition, Williams and Wilkins.
4. Escott-Stump, S. (1998) : Nutrition and Diagnosis Related Care, 4th Edition, Williams and Wilkins.
5. Garrow, J.S. James, W.P.T. and Ralph, A. (2000): Human Nutrition and Dietitics, 10th Edition, Churohill Livingstone.
6. Williams, S.R. (1993): Nutrition and Diet Therapy, 7th Edition. Times Mirror / Mosby College Publishing.
7. Davis. J. and Sherer. K. (1994): Approval nutrient in pediatrics, Boston, little, Brown & Co.,
8. Walker, W.A. and Watkins, J.B. (Ed.) (1985): Nutrition in Pediatrics, Boston, little, Brown & Co.,
9. Guyton, A.C. and Hall, J.E. (1999): Textbook of Medical Physiology, 9th Edition, W.B. Saunders Co.,
10. Ritchie, A.C. (1990): Boyd's textbook of Pathology, 9th Edition, Lea and Febiger, Philadelphia.
11. Fauci, S.A. et al. (1998): Harrison's Principles of Internal Medicine, 14th Edition, McGraw Hill.
12. World Cancer Research Fund (1997): Food, Nutrition and the Prevention of Cancer. A Global perspective Washington, E.D. WCRF.
13. Dave N R,(2004) “Nutrition & Diet Therapy”,Department of Home Science,
14. Saurashtra University .Rajkot.

M. Sc. (HOME SCIENCE) SEMESTER – I
NUTRITION DURING PREGNANCY AND LACTATION
- PAPER NO.05
E.-1 - MHS1nplE0051
(CREDITS: THEORY – 2, PRACTICAL –, TOTAL – 2)

Objectives

This course is designed to enable the students to:

- Understand physiological changes in pregnancy and lactation.
- Understand the inter-relationship between nutrition and growth and development during life cycle

UNIT - 1. IMPORTANCE OF MATERNAL NUTRITION

- Importance of Nutrition prior to and during pregnancy.
- Pre-requisites for successful outcome. effect of under nutrition of mother and child including pregnancy outcome and maternal and child health
- Short and long term.
- Physiology and endocrinology of pregnancy and embryonic and fetal growth and development.
- Nutritional requirements during pregnancy.
- Adolescent pregnancy
- Intra-uterine growth retardation
- Complications of pregnancy and its management

UNIT - 2 LACTATION

- Nutritional requirements during lactation
- Human milk composition during lactation
- Human milk composition and factors affecting breastfeeding and fertility.
- Management of lactation-prenatal breast feeding skill education. Rooming in.
- Problems-sore nipples, engorged breast, inverted nipples etc.
- Exclusive breastfeeding.

UNIT;-3.COMMON DISORDERS OF PREGNANCY:

- Anemia,
- TB,
- HIV Infection,
- Hypertension,
- moderate
- severe malnutrition

RECOMMENDED READINGS;-

1. International Food Policy Research Institute (1997). Care and Nutrition: Concepts and Measurement. International Food Research Institute Washington DC., USA.
2. International Child Health: A Digest of Current Information.
3. Barker, D.J.P. (1998). Mothers, Babies and Health in Later Life. Edinburgh, Churchill Livingstone
4. Ward, R.H.T; Smith, S.K. Donnai, D. (Eds.) (1994) Early Fetal Growth and Development. London, RCOG Press.
5. Sachidev, IIPS and Choudhary, P. (1995), Nutrition in Children Developing Country Concerns. Cambridge Press, New Delhi.
6. King, F.S. (1992). Helping Mothers to Breastfeed Association for Consumers Action on Safety and Health, Mumbai.
7. Wallace, H.M. and Giri, K. (1990). Health Care of Women and Children in Developing Countries. Third Party Publishing Co. Oakland.
8. Tanner, J.M. (1988) Foetus into Man: Physical Growth from Conception to Maturity. Weaton and Co. Ltd., Great Britain.
9. Luke, B. Johnson, T.R.B.; Petrie, R.H. (1993). Clinical Maternal Fetal Nutrition. Little Brown and Co. Boston
10. ACC / SCN Reports.
11. WHO (1999) Nutrition for Health and Development: Progress and Prospects on the Eve of the 21th Century. WHO / NHD /99.9. Geneva.
12. Alderman, H; Behrman, J.; Lavy; Menon, R. (1997) Child Nutrition, Child Health and School Enrollment. Policy Research Working Paper 1700. Washington DC. World Bank
13. Rajpura.,M.R. (2012).Maternal and Child Nutrition. Jaipur:Arravali Prakashan

M. Sc. (HOME SCIENCE) SEMESTER – I
PRINCIPLES OF INTERIOR DECORATION
- PAPER NO.05
E.-2 - MHS1pidE0052
(CREDITS: THEORY – 4, PRACTICAL – 2, TOTAL – 6)

Objectives

- To understand the factors influencing space design organization for optimum comfort and functionalism.
- To understand the application of anthropometric data in designing interior
- To evaluate ergonomically residential interior space for various activities.
- To provide adequate facility for work, relaxation, rest, comfort, privacy, care, aesthetics etc. through interior space designing.
- To study the materials along with fittings and fixtures used in residential interiors.
- To develop skills of drawing the working details and execution drawings.

UNIT-1. In-depth understanding of residential interior space design from design point of view.

UNIT-2. Study of factors influencing furnishing of residential interior spaces. Their use & care

UNIT-3 Factors to be considered while designing.

- Orientation
- Grouping of user's area.
- Circulation between and within user's area.
- Light and ventilation.
- Flexibility.
- Privacy.
- Roominess (Spaciousness).
- Services.
- Aesthetics.
- Cost.
- Basics of furniture design and types of furniture design.

UNIT-4 Current trends in interior design.

UNIT-5 Consideration of ergonomics in interior design.

- Importance of ergonomics in interior design.
- Work, worker and working environment relationships
- Kitchen and storage as most important work area.
- Ergonomical evaluation for health and safety of user in residential space design.
- Study of different body postures used in different activities and its relation to fatigue.

UNIT-6. Application of appropriate materials for various uses.

RECOMMENDED READINGS;-

1. Alexander, N.J. Mercoust Brace (1972): Designing Interior Environment. Havanovich Inc.
2. Ball, Victoria K 1655 (1980): The Art of Interior Design. Mc Millan & Co., New York.
3. Bhatt, P.D., Goenka S. (1990): Foundation of Arts Design, lakhari Book Depot, Bombay.
4. Butler Margaret G.E. Grecks Benyl S. (1980): Fabric Furnishing, E.T. Badsford Ltd., London.
5. Chudley, R. (1987): Construction Technology Vol. 1-2 1-IBS Long man Ltd., new York.
6. G.V. Robert (1983): Rendering with Pen + Ink. Thames, Hudson, London
7. Gustafsan Karen and Yes Robert (1983): Corporate Design, Thomas and Hudson, London.
8. Grandjean Ettiens (1978): Ergonomics of the Home, Taylors and Fracis Ltd., London
9. Grandjean Ettieens (1979): Human Dimensions and Interior Space Whitney, New York.
10. Laoch, Sid Del har, Techniques of Interior Design, Rendering and Presentation, McGraw Hill, New York.
11. Leinbac (1986): Visualisation Techniques, McMillan (Prentice hall), New Jersey.
12. Rangwala, N. Building Materials.
13. Encyclopedia of Interior Design.

M. Sc. (HOME SCIENCE) SEMESTER – I
DEVELOPMENT PROCESS IN GENDER
- PAPER NO.05
E.-3 - MHS1dpgE0053
(CREDITS: THEORY – 2, PRACTICAL – 0, TOTAL – 2)

Objective :-

- To Understand The Concept, Need Relevance And Dimension Of Gender Empowerment
- To Get Sensitized To Gender Disparities / Imbalances And Problem Of Women
- To Understand The Efforts At Different Levels For Empowering Women
- To Know The Support System In The Country For Women's Development

UNIT: - 1. Gender And Development

- Concept Of Gender , Gender Roles , Changing Trends ,
- Gender Analysis. Shift From Welfare To Development And
- Empowerment, Gender In Development, Gender Development.
- National And International Efforts For Gender
- Empowerment

UNIT:-2. Status Of Women

Status- Meaning, Status Of Women-A Situational Analysis, Demographic, Education, Employment, Political And Health(General, Occupational And Reproductive)Changing Scenario.

UNIT:-3 Violence Against Women

Dowry, Divorce, Female Feticide And Infanticide, Domestic Violence, Sexual Harassment And Exploitation, Portrayal Of Woman In Mass Media. Efforts For Elimination Of All Forms Of Discrimination.

UNIT:-4 Policies And Programmes For Women's Development

- National Policy For Empowerment Of Women, Policy Perspectives, Mainstreaming, A Gender Perspective In The Development Process.
- Economic Empowerment: Poverty Eradication, Micro-Credit, Self-Help Groups, Women And Agriculture, Women And Industry And Support Services.
- Social Empowerment: Education, Health, Nutrition, Drinking Water And Sanitation, Housing And Shelter, Environment.
- Legal Empowerment: Legal Literacy On Personal And Family Laws, Role Of Family Court And Legal Aid Centers.
- Political Empowerment: Role Of Panchayatiraj In The Political Empowerment Of Women

RECOMMENDED READINGS;-

1. Black M.(1993) : Girls And Women, A Unicef Development Priority, Unicef; New York
2. Laxmidevi(1998).Women And Development. Institute For Sustainable Development And Anmol Publications Pvt.Ltd.;New Delhi.
3. Sahay S. (1998) Women And Empowerment: Approaches And Strategies. Discovery Publishing House: New Delhi
4. Sharma,O.C.(1994). Crime Against Women. Sterling Publishers Pvt.Ltd; New Delhi.
5. Yadav,C.P. (2000). Empowerment Of Women. Vol.I & Ii

M. Sc. (HOME SCIENCE) SEMESTER – I
TEXTILE TECHNOLOGY
- PAPER NO.05
E.-4 - MHS1tt0E0054
(CREDITS: THEORY – 2, PRACTICAL – 0, TOTAL – 2)

Objectives

1. To acquaint the students about the polymers of which the textile fibres are made.
2. To understand the chemistry, production and fundamental properties of natural and synthetic fibres.
3. To familiarise with the chemical processing from desizing to finishing of textiles and principles.
4. To acquaint the students with some advanced textile technology.

Contents

Chemistry Of Cellulosic Fibres

Introduction to cotton, varieties, properties, longitudinal and cross sectional view.

Molecular structure of cellulose, action of acids and alkalis, hydro cellulose and oxycellulose, mercerisation, liquid ammonia treatment.

Regenerated cellulosic fibres – viscose rayon, cuprammonium rayon, cellulose acetate, rayon, polynosic – their manufacture, properties and uses.

Protein Fibres – Wool & Silk

Chemical composition, molecular structure, physical and chemical properties, action of acids, alkalis and other chemical on protein fibres.

Brief description on, felting of wool, degumming and weighting of silk, shrink proofing of wool.

Synthetic Fibres – Polyester, polyamide and acrylonitrile fibres.

Chemistry of the fibres – raw material, manufacturing process from polymer to fibre stage.

Physical and chemical properties of all the fibres and their uses. Examples of commercial production in India.

Blends of different fibres, composition and properties and uses in textiles and clothing.

Other natural and synthetic fibres. Their chemical composition, properties and uses viz. jute, flax, hemp, tencel, polyethylene, polypropylene, carbon, polycarbonate, metallic, glass fibre and polyurethane fibres.

References

1. Shenai, V.A. (1984): Technology of Textile Processing, Vol.-IX, Sevak Publication.
2. Cook, J. Gordon, Hand Book of Textile Fibres, Man-Made Fibres, Merrow Publishing Co. Ltd., England.
3. Moncrief : R.W. Manmade Fibres, John Willey & Sons New York.
4. Trotman, E.R. (1975): Dyeing and Chemical Technology of Textile Fibres Charles Griffino Company Ltd., London.
5. Marsh, J.T. (1979): An Introduction to Textile Finishing, B. I., Publications.
6. Mark H., Wooding N.S. & Atlas, Smeeds, (1970): Chemical after Treatment of Textiles, John Willey & Sons Inc., NY.
7. Lewin, M. and Sello, Stephen B. (1983): Handbook of Fiber Science and Technology, Vol. II, Chemical Process of Fibers and Fabrics, Functional Finishes - Part A, Marcel Dekker, Inc., NY and Basel.
8. Shenai, V.A. (1991): Introduction to the Chemistry of Dyestuffs, Sevak, Prakashan,.
9. Gulrajani M.L. and Gupta, D. (1992): Natural Dyes and their Application to Textiles, IIT Delhi.
10. Mohanty, Chandramouli, Naik, (1987): Natural dyeing process of India, Ahmedabad, Calico Museum of Textiles.
11. India Horti business on line, <http://www.agroindia.org/1HOL>.

M. Sc. (HOME SCIENCE) SEMESTER – I

RURAL DEVELOPMENT - PAPER NO.05

E.-5 - MHS1rd0E0055

(CREDITS: THEORY – 2, PRACTICAL – 0, TOTAL – 2)

Objectives;-

- To make students aware about rural Indian society.
- To make students aware about conditions and living in rural areas.
- To make students aware about ongoing rural development programmes. To make students aware about need for future development in rural areas.

UNIT; - 1. RURAL DEVELOPMENT -INDIAN CONTEXT

- Rural Society and Economy - Introduction to Rural Sociology, Rural Demography, Rural Social Structure, Rural Economic Structure, Rural Poverty
- Rural Development : Concepts, Structure and Experience - Development-An Overview, Rural Development : Concepts and Strategies, Rural Development – Agrarian Issues - Agrarian Movements, Land Reforms, Green Revolution Agricultural Extension Services Rural Development Administration - Administrative Structure, Panchayati Raj, Cooperatives in Rural Development, Rural Credit and Banking
- Dynamics of Change in Rural India - Social Change : Mobility & Mobilization, Empowerment information, Education and Communication (IEC), Information Technology and Rural Development

UNIT;-2. RURAL DEVELOPMENT PROGRAMMES

- Poverty Alleviation Programmes – A Retrospect - Poverty Alleviation Programmes – A Retrospect
- Minimum Needs Programme, Integrated Rural Development Programme (IRDP), TRYSEM and DWCRA
- Jawahar Rozgar Yojana (JRY), Employment Assurance Scheme (EAS) Programmes for self & Wage Employment and Social Security Current Strategy - Swarnjayanti Gram Swarozgar Yojana (SGSY)-1, Swarnjayanti Gram Swarozgar Yojana (SGSY)-2, Sampoorna Grameen Rozgar Yojana (SGRY), National Social Assistance Programme (NSAP), Food Security – TPDS 9

UNIT;-3. Other Development Programmes

- Prime Minister's Rozgar Yojana (PMRY), Rural Employment Generation Programme (REGP), Rashtriya Mahila Kosh, Programmes of Development Finance Corporations
- Rural Basic Services and Infrastructure - Elementary Education and Total Literacy Campaign (TLC), Rural Housing, Rural Health Care, Drinking Water and Rural Sanitation, Rural Electrification & Energy, Rural Connectivity.

- Natural Resources Management and Environment - Drought-Prone Areas Programme and Desert Development Programme, Integrated Wasteland Development Programme, Social Forestry and Joint Forest Management, Science and Technology for Rural Development.

References:

1. Rural Development. O.P.Dhama and Bhattnagar.
2. IGNOU course on Rural Development Material.
3. Issues on Rural Finance Infrastructure and Rural D....by G DBanerjee , Srijeet Banerji , 2010.
4. Rural Development Programmes in India, Meenu Jain, 2011.
5. Rural Development and Planning in India, Dr V Nath, 2010.

- BHAKT KAVI NARSINH MEHTA UNIVERSITY, JUNAGADH
- EXAMINATION CODING SYSTEM
- M.Sc. HOME SCIENCE
- SEMESTER – 2

ANNEXURE ‘A’

SEM. – 2

Core Courses	Course Code	Subject	T/P	Credit	Contact Hrs/Week	Exam Duration in Hrs	Marks					
							Internal		External		Total	
							Total	Passing	Total	Passing	Total	Passing
D.S.C.	D.S.C.	GERIATRIC CARE	T	4	4	2.5	30	12	70	28	100	40
CORE COURSE	CC-4T	APPAREL DESIGN AND CONSTRUCTION	T	4	4	2.5	30	12	70	28	100	40
	CC-4P	APPAREL DESIGN AND CONSTRUCTION	P	2	4	5	0	0	50	20	50	20
	CC-5T	PRICIPALS OF FOOD SCIENCE	T	4	4	2.5	30	12	70	28	100	40
	CC-5P	PRICIPALS OF FOOD SCIENCE	P	2	4	5	0	0	50	20	50	20
	CC-6T	STASTIC AND COMPUTER APPLICATION IN RESEARCH	T	4	4	2.5	30	12	70	28	100	40
	CC-6P	STASTIC AND COMPUTER APPLICATION IN RESEARCH	P	2	4	5	0	0	50	20	50	20
ELECTIVE (ANY ONE)												
ELECTIVE - 1	E-1T	NUTRITION FOR SPORTS AND FITNESS	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 2	E-2T	CONSUMERISM AND REDRESSAL	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 3	E-3T	AWARNNESS CHILD AND HUMAN RIGHTS	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 4	E-4T	FUNDAMENTALS OF INSTRUMENTATION IN COLOR SCIENCE	T	2	2	1.5	15	06	35	14	50	20
ELECTIVE - 5	E-5T	PROGRAM PLANNING AND EXTENSION	T	2	2	1.5	15	06	35	14	50	20
TOTAL				24	30		135		465		600	

- BHAKT KAVI NARSINH MEHTA UNIVERSITY, JUNAGADH
- EXAMINATION CODING SYSTEM
- M.Sc. (HOME SCIENCE)
- SEMESTER – 2

ANNEXURE 'B'

SEM. – 2

Core Courses	Course Code	Subject	T/P	Credit	Paper No.	Paper Code	Marks					
							Internal		External		Total	
							Total	Passing	Total	Passing	Total	Passing
D.S.C.	D.S.C.	GERIATRIC CARE	T	4	P-1	MHS2coeDS010	30	12	70	28	100	40
CORE COURSE	CC-4T	APPAREL DESIGN AND CONSTRUCTION	T	4	P-2	MHS2atdC0420	30	12	70	28	100	40
	CC-4P	APPAREL DESIGN AND CONSTRUCTION	P	2			0	0	50	20	50	20
	CC-5T	PRICIPALS OF FOOD SCIENCE	T	4	P-3	MHS2fs0C0530	30	12	70	28	100	40
	CC-5P	PRICIPALS OF FOOD SCIENCE	P	2			0	0	50	20	50	20
	CC-6T	STASTIC AND COMPUTER APPLICATION IN RESEARCH	T	4	P-4	MHS2scaC0640	30	12	70	28	100	40
	CC-6P	STASTIC AND COMPUTER APPLICATION IN RESEARCH	P	2			0	0	50	20	50	20
ELECTIVE (ANY ONE)												
ELECTIVE - 1	E-1T	NUTRITION FOR SPORTS AND FITNESS	T	2	P-5	MHS2nhfE0051	15	06	35	14	50	20
ELECTIVE - 2	E-2T	CONSUMERISM AND REDRESSAL	T	2		MHS2cirE0052	15	06	35	14	50	20
ELECTIVE - 3	E-3T	AWARNESS IN CHILD AND HUMAN RIGHTS	T	2		MHS2chrE0053	15	06	35	14	50	20
ELECTIVE - 4	E-4T	FUNDAMENTALS OF INSTRUMENTATION IN COLOR SCIENCE	T	2		MHS2csiE0054	15	06	35	14	50	20
ELECTIVE - 5	E-5T	PROGRAM PLANNING AND EXTENSION	T	2		MHS2pdeE0055	15	06	35	14	50	20
TOTAL				24			135		465		600	

M.Sc. (HOME SCIENCE) SEMESTER – 2
DSC- 1. - GERIATRIC CARE - PAPER NO. 01

Code; - MHS2coeDS010

Credits: - Theory 04 + Practical 0 - Total – 4

Objectives

- To gain knowledge and insight regarding principles of early childhood care and education.
- To develop the skill and techniques to plan activities in ECCE centers of different types, to different types to conduct activities in early childhood care and education and to work effectively with parents and community.
- To enable students to become aware and sensitized to issues related to care of the elderly.
- To enable students to understand the theoretical perspectives of the aging process.
- To develop skills for organizing activities for the elder

UNIT - 1. Introduction

- Emergence and scope of gerontology and elderly care.
- Historical perspective, demographic trends in India.
- Concept of aging and problems: Social, medical, psychological problems, occupational etc.

UNIT - 2. Theoretical perspectives

- Theories: Disengagement theory, Activity theory, Human development theory ,Continuity theory, Age stratification theory, Labeling theory

UNIT; - 3. Aging process

- Biological and physiological aspects, psychological aspects; social aspects;
- Social status, retired status, single status, economic status security, guide and teacher, social adjustment and recognition;
- Spiritual aspects: karma theory and religion;
- Economic aspects.

UNIT;- 4. Adjustment patterns and changing lifestyles in old age

- Family patterns in later life: Changing roles and the aging family; Conjugal: Husband Wife relations in old age ;sexual adjustment;
- Retirement years and marital adjustment;
- Intergenerational family relations; grand parenthood; Widowhood/singlehood ;Alternative life style; second marriage in the later life.

UNIT- 5. Work, leisure and retirement patterns

- Work-Meaning of work ,individual motivation; , leisure; Retirement-benefits, freedom of retirees ,fear change in personal and social life, problem like-sense of loss, women retirees ,awareness ,use of authority ,social worth;
- Death Dying and Breavement
- Impact of death on society, Attitude towards death; Denial and thoughts of death; Bereavement, grief and social setting.
- Services and programs for the Aged
- Categories of services: Housing, health, leisure time activities; institution for the Aged day care centre's; economic programmes ; Re-engagement (after retirement), Retirement pension, death cum retirement gratuity, provident fund, health measures. Insurance scheme, investment & taxation and property.

References

1. Aiken ,L.R.(1978).The psychology of later life,Philadephia:WB Sauders Company.
2. Blau, Zana Smith(1983)Old age in Changing Society,New YorkNew View Prints
3. Chowdhery Paul D.(1992)Aging and the aged.New Delhi:Inter india Pub.
4. Cook Alicia Skinner(1983)Contemporary Perspectives on Adult Development and Aging. New York:Macmillon
5. Ghosh, B.(1988).Contemporary Social Problems in India,Bombay:Himalaya Publishing.
6. Kennedy Carroll(1988).Human Development.NewYork:Macmillon.
7. Kimmel Dougals (1974).Adulthood and Aging. New York:Wiley.
8. Pinkston,P.H.. and N.K. Linsk(1984). Care of the Elderly:A family approach.New York:Pergamon press.
9. Sharma,M.L.&T.M. Dak(1987).Aging in India:Challenge for the Society. Delhi:Janta Publishing.

M.SC. (HOME SCIENCE) SEMESTER – 2
CC- 4 - APPAREL DESIGN AND CONSTRUCTION - PAPER NO. 02

CODE;- MHS2atdC0420
CREDITS: - THEORY 04 + PRACTICAL 02 - TOTAL =8

Objectives

- To impart an in-depth knowledge of style reading, pattern making and garment construction technique.
- To development and understand the principles of pattern making through flat pattern and draping

Theory

UNIT:- 1. Detailed study of industrial machines and equipment used for

- Cutting
- Sewing
- Finishing
- Embellishment
- Study the interrelationship of needles, thread, stitch

UNIT:-2. Methods of pattern making

- Drafting
- Flat pattern
- Draping
- paper pattern
- Layout

UNIT :3. Elements of design-line and form, color and texture

UNIT:4. Principles of design-harmony, balance, proportion, rhythm and emphasis

UNIT:5. Colour consideration-colour harmonies and colour ways

UNIT -6. Buying criteria for

- Knits, silks, denim and other special fabrics
- Selection of appropriate fabrics and designs for different garments, different age groups a seasons
- Ready made garments

Practical

1. Different Necklines and facings

- Scoped necklines
- Built-up necklines
- Cowl necklines

2 Plackets

- Center button closing
- Asymmetric closing
- Double breasted

3. Motif development - geometrical, simplified, naturalized, stylized, abstract and Ornamental

Big and small motifs-enlargement and reduction, growth of Combining motifs. big and small motif.

4. Placement and repeats for all over patterns.

5. Introduction to related computer software

6. Design of Indian and western apparel.

References

1. Leonard G. Rubin (1976): The World of Fashion, Publication Canfield Press, San Fransisco.
2. Thames and Hudson (1994): Fashion Illustration Today, Thames and Hudson Ltd., London.
3. Partick John Ireland: Fashion Design Illustration, B.T. Batsford Ltd., London.
4. Kathryn Mokelvery and Jamine Munslow (1997): Illustrating Fashion, Blackwell Science Ltd.,
5. Max Tilke (1990): Costume Patterns and designs, Rizzoli, New York.
6. Anne Morroll (1995): The techniques of Indian Embroidary, B.T. Batsford Ltd., London.
7. Prakash, K. (1996): Heritage-Traditional Border Collection, The Design Point Publication

M.Sc. (HOME SCIENCE) SEMESTER – 2
CC- 5 – PRICIPALS OF FOOD SCIENCE – PAPER NO. 03

Code;- MHS2fs0C0530
Credits: - Theory 04 + Practical 02 - Total =8

Objectives: This Course Is Designed To:

- Provide An Understanding Of Composition Of Various Foods.
- Familiarize Students With Changes Occurring In Various Food Stuff As A Result Of Processing And Cooking
- Enables Students To Use The Theoretical Knowledge In Various Application And Food Preparation.

UNIT 1: Constituents of Foods: - Properties and Significance

Unit 2: Water:-

- Properties, Forms of water
- Water activity and food spoilage
- Free and bound water

Unit 3: Sugars, Sweeteners and Polysaccharides:-

- Types Of Sugars
- Characteristics Of Sugars
- Sugar Substitutes
- Polysaccharides :Starch, Properties Of Starch
- Non Starch Polysaccharides – Dextrin, Cellulose, Hemi Cellulose, Pectin, Gums

Unit 4: Lipids:-

- Functional Properties Of Fats
- Rancidity

Unit 5: Enzymes:-

- Classification
- Amylases, Lipases And Proteolytic Enzymes

Unit 6: Beverages :-

- Synthetic And Natural
- Alcoholic And Non Alcoholic
- Carbonated And Non Carbonated
- Coffee, Tea ,Cocoa, Malted Drinks

PRACTICALS:

1. Effect Of Solutes On Boiling And Freezing Point Of Water
2. Effect of Types Of Water On Characteristics Of Cooked Vegetables, Pulses, And Cereals
3. Sugar Cookery :A) Solubility B) Caramelization C) Crystallization
4. Starches, Vegetable Gums, And Cereals: A) Dextrinization B) Gelatinization C)Factors Affecting Gel Formation D)Gluten Formation And Factor Affecting Gluten Formation
5. Gelatine : Gel Strength And Factors Affecting Gelation
6. Beverages

REFERENCES

1. Charley, H.(1982): Food Science(2nd edition), John Willey & Sons, New York.
2. Potter, N. and Hotchkiss, J.H. (1996): Food Science, Fifth edition, CBS publishers and Distributors, New Delhi.
3. Belitz, H.D. and Gropsh, W. (1999): Food Chemistry (2nd edition), Springer, New York.
4. Abers, R.J. (Ed.) (1976): Foam, Academic Press, new York.
5. Cherry, J.P. (Ed.) (1981): Protein Functionality in Foods, American Chemical Society, Washington,D.C.
6. Pomeranz, Y. (Ed.) (1991): Functional Properties of Food Components, (2nd edition), Academic Press, New York.
7. Duckworth, R.B. (Ed.) (1978): Water Relation to Foods, Academic Press, London.
8. Parihar, P., Agarwal, R. jain D.K. and Mandhyan, B.L. (1977): Status Report on Dehydration of Eggs. PHT / CAE / Publishers.
9. Marshall, K.R. and Harper, W.J. (1988): Whey Protein Concentrates, IDF Bulletin No.233.
10. Tindall, H.D. (1983): Vegetables in the Tropics, MacMillan, Press, London.

M.Sc. (HOME SCIENCE) SEMESTER – 2
CC- 6 – STASTIC AND COMPUTER APPLICATION IN RESEARCH

- PAPER NO. 04

Code;- MHS2scaC0640

Credits: - Theory 04 + Practical 02 - Total =8

Objectives:

- To understand the role of statistics and computer applications in research.
- To apply statistical techniques to research data for analyzing & interpreting data meaningfully.

NOTE: Students should be given hands on experiences to use appropriate software packages for selected statistical analyses.

Unit I: Statistical Analysis

- Conceptual understanding of statistical measures
- Measurement of central tendency
- Measurement of variation
- Skewness and Kurtosis
- Properties and uses of Binomial and normal distribution

Unit II: Testing of Hypothesis

- Typr I and Type II errors
- Levels of Significance

Unit III: Parametric –Small and Large sample test

- Chi square test
- Independence of Attributes 2x2 and rxc contingency tables

Unit IV: Student 't' test and F test

Unit V: Correlation, coefficient of correlation

Practical

- MS Office. (A) MS Word (B) MS Excel (C) MS Power point
- SPSS

References;

1. Dooley, D. (1995): Strategies for interpreting Qualitative Data; Sage Publications, California.
2. Gay, L.R. (1981, 2nd Ed.): Educational Research, Charles. E. Merill, Columbus, Ohio.
3. Long, J.S. (Ed.)(1988): Common Problems Proper Solutions : Avoiding Errors in Quantitative Research. Beverly Hills, Sage Publications, California.
4. Mukherjee, R. (1989): The Quality of Life: Valuation in Social ResearchH, Sage Publications, New Delhi. Stranss, A. and Corbin. J. (1990): Basis of Qualitative Research: Grounded Theory

M.Sc. (HOME SCIENCE) SEMESTER – 2
E-1 – NUTRITION FOR SPORTS AND FITNESS – PAPER NO. 05

Code; - MHS2nhfE0051

Credits: - Theory 02 + Practical 00 - Total = 2

Objectives: This course will prepare the students to:

- Understand the components of health and fitness and the role of nutrition in these.
- Make nutritional, dietary and physical activity recommendations to achieve fitness and well-being.
- Develop ability to evaluate fitness and well-being.

Contents

UNIT- 1. Introduction to Nutrition, Health, exercise and fitness:

Nutrition, exercise, physical fitness and health and their inter-relationship. Types of exercise and its health benefits.

UNIT- 2. Review of different energy systems for endurance and power activity:

Energy input and output. Calculation of energy expenditure by different methods. Fuels and nutrients to support physical activity. Mobilization of fat stores during exercise.

UNIT- 3. Nutrition in Sports:

Nutritional aspects of macro and micro nutrients in sports. Sports specific requirement. Pre-game, during and post-game meals.

UNIT- 4. Nutritional and exercise regimes for management of obesity.

Critical review of various dietary regimes for weight and fat reduction.

UNIT- 5. Dietary supplements and Ergogenic aids:

Definitions, types and use of different ergogenic aids like nutritional, physiological, pharmacological etc and commercial supplements, Sports drinks, sports bars etc. Regulations regarding dietary supplements and ergogenics.

References

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3. Whitney, E. N. & Rolfes, S.R. (1999): Understanding Nutrition, 8th Edition, West / Wadsworth, An International Thomson Publishing Co.,
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5. Parikova, J. nutrition, Physical activity and health in early life, Ed. Wolinsky, I., CRC Press.
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7. McArdle, W. Katche, F. and Katch, V. (1996). Exercise Physiology. Energy, Nutrition and Human performance 4th edition, Williams and Wilkins, Philadelphia.

Journals

1. Medicine and Science in Sports and Exercise.
2. International Journal of Sports Nutrition

M.Sc. (HOME SCIENCE) SEMESTER – 2
E.-2 – CONSUMERISM AND REDRESSAL – PAPER NO. 05

Code;- MHS2cirE0052
Credits: - Theory 02 + Practical 00 - Total = 2

Objectives

- To equip and impart knowledge on consumer related facts and issues
- To provide an understanding of the significance of consumer information
- To develop and acquire skills in consumerism and utilizing the provisions in redress mechanism

UNIT-1 Consumer movement

- Origin and growth
- Philosophy , objectives
- Consumer movement in developed countries and global experience – a brief overview.
- Indian experience, reasons for slack in consumer movement. Future of consumer movement in India.

UNIT-2 Consumer protection

- Legal problems in buying and paying for goods and services.
- Consumer representation – Govt. agencies, consumer organization, legal cells in industries, public interest legislation.
- Quality control and standardization – national and global

UNIT-3 Consumer information

- Need and significance Sources
- Consumer services – public and private – merits and limitations.
- Institutional support – corporate accountability, Government policies and responsibilities.
- Do's and Don't's towards better consumerism

UNIT-4 Consumer redressal

- Consumer protection Act.1986.
- Definitions of consumer, complaint, complaint service, unfair trade practices as given in CPA.
- Procedure for filing a complaint appeal to district, state and national commissions.
- Some tips for ensuring redressal

UNIT-5 Alternative redressal mechanism for consumer grievances

- Verbal and written complaints
- Media connected services
- Third party assistance – Arbitrator, ombudsman
- Institutional assistance
- Lok Adalats
- Public interest litigation
- Government and other agencies

UNIT-6 Project and research in consumer affairs – visit to consumer redressal forums.

Reference

1. D.N. Saral (1990): Law of consumer protection in India, Tripathy Private Limited, N.M.New Delhi
2. Gurjeet Singh (1996) : The Law of Consumer Protection in India, Deep and Deep Publication, New Delhi.
3. Jajie Mandana (1977) : The Indian Market Place, Guidelines to Consumer Education, Bangalore, Brindawan Publishing House, New Delhi.
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7. Sherlikar , S.A. Trade Practice and Consumer Protection. Himalaya Publishing House, Mumbai.
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9. Azmi S.S.H.(1992): Sale Goods and Consumer Protection in India, Deep and Deep Publications, New Delhi.
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M.Sc. (HOME SCIENCE) SEMESTER – 2
E.3 – AWARENESS IN CHILD AND HUMAN RIGHTS - PAPER NO. - 05

Code:- MHS2chrE0053
Credits: - Theory 02 + Practical 00 - Total = 2

Objective

To develop awareness and perspective of Human Rights as a professional in the field of Human Development.

To develop sensitivity to Human Rights with specific reference to children's rights

To gain knowledge about Charter on Human and Children's rights

To work with women and children to create awareness about their rights and to guide them to access their rights.

UNIT- 1. Definition and Evolution of Rights

- Human rights
- Child rights
- Women's rights

UNIT- 2. Status of Indian Children and their rights

- Gender disparities (infanticide, foeticide, girl child).
- Children in difficult circumstances (Children of prostitutes, child - prostitutes, Child labour, street children, refugee children and child victims of war).
- Children with special needs.

UNIT- 3. Status of Women and their Rights

- Status of women in India.
- Women and human rights
- Forms of violation of women's rights
- Violence against women in home, work places and society
- Sexual harassment, rape
- Crime against women
- Political discrimination

UNIT- 4. Human Rights

Moral Rights (A) Legal right (B) Civil and political rights

Advocacy for Human rights.

References

1. Butterworth, D. and Fulmer, A (1993). Conflict, Control Power. Perth : Child and Family Consultants.
2. Bruner, T. (1986). Actual minds – possible words. London ; Harvard University Press.
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25. Manav Adhikar and Sanyukta Rastra Sangh, Satis Chaturvedi
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M.Sc. (HOME SCIENCE) SEMESTER – 2
E. -4 – FUNDAMENTALS OF INSTRUMENTATION IN COLOR SCIENCE

PAPER NO. -05

Code;- MHS2csiE0054

Credits: - Theory 02 + Practical 00 - Total = 2

Objectives

- To develop and understanding of scientific aspect of colour, difference between dyes and colour compound.
- Understanding of colour formulation, assessment of colour differences and sorting techniques and colour perception.
- To understand theory of colour instrument in solution and all textile and instrument used for colour measurement.
- To acquaint students with the recent development regarding eco-regulation and banned dyes.

UNIT- 1. Nature of light

- Electromagnetic radiation, Electromagnetic Spectrum and its uses in physical organic chemistry, sources of natural and artificial light, properties of artificial light source, adsorption and scattering of light, spectrophotometric curves and their relationship to perceive colour
- Relation between colour and chemical constitution of dyes, to acquaint with colour index.
- Instruments for the measurement of colour, principles of spectrophotometric, early colourimeter, absorption spectroscopy, Beer-Lambert's Law, Single beam and double beam spectrophotometer.
- Color mixing system, colour order system, CIE Colour specification, Illuminant, yellowness index and whiteness index, reflectance spectrophotometer, Kubelka-Munk theory, Relation between K/S and concentration colourant, understanding colour difference hue, chroma etc.
- Introduction to chromatography and basic instrumentation, Application of thin layer chromatography, HPLC and GC in dye analysis.

References

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2. Instrumental methods of Chemical Analysis, Galen W. E. Wing, McGraw-Hill Book Company.
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4. Dyeing and Chemical Technology of Fibers, S. R. Trotman, Charles Gribbin & Company Limited.
5. Chemistry of Synthetic Dyes Part I & II – K. Venkatraman.

M.SC. (HOME SCIENCE) SEMESTER – 2
E.-5 – PROGRAM PLANNING AND EXTENSION

PAPER NO. -05

CODE;- MHS2pdeE0055

CREDITS: - THEORY 02 + PRACTICAL 00 - TOTAL = 2

Objectives

To enable students:

- To understand the changing concept of extension.
- To get acquainted with the trends in extension approaches and models.
- To identify the support system development for extension education.

UNIT- 1. Programme planning

- Meaning and importance of programme planning in extension.
- Principles of programme planning: programme development cycle and its components.
- Programme projection :difference between Programme projection and planning.
Identifying felt needs of people, collection of base line data

UNIT- 2. Plan of work

- Meaning, importance, components of a plan of work, developing a plan of work,
- Factors to be considered in preparing the plan of work.
- Pre-requisites for developing plan, guidelines for developing a written annual plan, criteria for judging the plan of work.
- Meaning of resource, types of resources, identification and appraisal of resources,resource mapping,computer application for programme planning.
- Resources for programme planning.

UNIT-3. Programme Implementation

- Aspects of execution Factors responsible for the successful conduct of a program me.
- Role of officials and non officials in programme implementation.
- Linkages with other agencies. Problems in implementation.

UNIT-4. Evaluation and Follow up

- Meaning and purpose of evaluation, types of evaluation, self evaluation, criteria for evaluation
- Tools for evaluation, observation sheet and checklist.
- Follow-up: Need for follow-up, methods for follow-up,correspondence, meetings.

UNIT- 5. Documentation

- Need for reporting
- Procedures for recording-aspects to be covered.
- Records and registers to be maintained in programme implementing institution

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