



MASTER OF PHILOSOPHY IN HOME SCIENCE SYLLABUS SESSION 2013-14

CURRICULUM

S. No	Code	Papers	Max. Marks	Ex. Hrs.
1	MPHS 101	Research Methodology	100	3
2	MPHS 102	Food Science	100	3
3	MPHS103	Specialization on Dissertation topic	100	3
4	MPHS104	Dissertation	100	-

RESEARCH METHODOLOGY THEORY AND TECHNIQUES MPHS 101

(Bio Technology, Biochemistry, Botany, Chemistry, Commerce, Computer Science, Corporate Secretaryship, Education, Education, Electronics, Information Technology, Microbiology, Home Science, Hotel Management, Hotel Management, Library Science, Management, Physics, Population Studies, Psychology, Public Administration, Social Work, Sociology, Tourism Management, Zoology)

Unit I

Research – Definition – Importance and Meaning of research – Characteristics of research – Types of Research – Steps in research – Identification, Selection and formulation of research problem – Research questions – Research design – Formulation of HypoDissertation – Review of Literature.

Unit II

Sampling techniques: Sampling theory – types of sampling – Steps in sampling – Sampling and Non-sampling error – Sample size – Advantages and limitations of sampling.

Collection of Data: Primary Data – Meaning – Data Collection methods – Secondary data – Meaning – Relevances, limitations and cautions.



Unit III

Statistics in Research – Measure of Central tendency – Dispersion – Skewness and Kurtosis in research. HypoDissertation – Fundamentals of HypoDissertation testing – Standard Error – Point and Interval estimates – Important Non-Parametric tests : Sign, Run, Kruskal – Wallis tests and Mann-Whitney test.

Unit IV

Para metric tests: Testing of significance – mean, Proportion, Variance and Correlation – testing for Significance of difference between means, proportions, variances and correlation coefficient. Chi-square tests – ANOVA – One-way and Two-way

Unit V

Research Report: Types of reports – contents – styles of reporting – Steps in drafting reports – Editing the final draft – Evaluating the final draft.

Reference Books:

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| 1. Statistical Methods | S.P. Gupta |
| 2. Research Methodology Methods and Techniques - | C.R. Kothari |
| 3. Statistics (Theory and Practice) - | B.N. Gupta |
| 4. Research Methodology Methods and Statistical Techniques - | Santosh Gupta |

FOOD SCIENCE MPHS 102

Unit I

Water and food dispersions: Physical properties of water; Structure of water molecule; Bound water; Colloidal systems; Types of food dispersions – sol, gel, emulsion and foam

Unit II

Polysaccharides and sugars: Starch- Flour mixtures – batters and dough- Leavening agents – physical, chemical and biological- Gluten formation- Gelatinization- Dextrinisation Sugar- Stages of sugar cookery- Crystallization



Unit III

Fats and oils: Functional properties of fats; Role of fats and oils in cooking; Trans fatty acids; Fat substitutes; Fat deterioration and antioxidants

Unit IV

Proteins; Milk and milk products: Composition of milk, properties of milk, effect of heat on milk, milk products and milk substitutes; Meat, fish and poultry - Composition, cooking methods, effects of cooking; Fish and sea foods - Composition, changes during processing; Pulses and legumes - Composition, processing toxic constituents; Eggs -Composition, functional properties of eggs, use in; cooking, egg processing, egg products; Protein concentrates, hydrolysates and texturised vegetable proteins

Unit V

Fruits and Vegetables: Enzymes and pigments in fruits and vegetables; Enzymic browning in fruits and vegetables

Reference Books:

1. Potter N. and Hotchkiss J.H. (1996) Food Science. 5th edition, CBSpublishers and distributors, New Delhi
2. Charley H. (1982) Food Science. 2nd edition, John Wiley and sons, New York
3. Peckham G. and Freeland Grages G.H. (1979) Foundations of Food Preservations
4. Meyer L.H. (1998) Food Chemistry. CBS publishers and distributors, Shahdara, Delhi 110032