

Research Methodology (RM) in Home Science

The standardized and uniform detailed syllabus, structure, learning framework, and evaluation scheme

1) A mandatory two (02) credit course titled “Research Methodology” shall be introduced in the Ph.D. Course Work.

2) The minimum contact hours are as follows:

a) Course Duration: 2 Weeks

b) Total Learning Hours: 30, including assignments and evaluation.

3) Medium of Instruction: The medium of instruction and delivery of the course/programme shall be in the English /Hindi/Marathi language.

4) Eligibility and Target Learners:

It is mandatory for all Ph.D. students registered at the University. There shall be no age limit for participation.

Research Methodology Course 2	Credit 2	Teaching Hrs. 30	Internal by Department /College
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Course Objectives	Course Objectives: The course aims to: 1. To develop fundamental understanding of research methodology and scientific reasoning; 2. To enhance skills in literature review, scientific writing, and research communication; 3. To impart knowledge of computational techniques and data analysis tools in physical Education; 4. To provide exposure to advanced experimental methods and instrumentation; 5. To inculcate principles of research ethics, IPR, and responsible publishing.		
Course Outcomes	After successful completion of course researcher should be able to – a) Formulate research problems and design appropriate methodologies; b) Review literature critically and produce scientific documents effectively; c) Apply computational techniques for modelling, simulation, and data analysis; d) Utilize and interpret advanced experimental techniques and instruments; e) Adhere to ethical practices and IPR norms in research and publication		
Unit System	Contents	Learning Hours	Incorporation of Pedagogies

Unit I	Research Process & Design strategies in Research 1.1 Research Process Meaning, objectives and areas of research in Food and Nutrition Identification of research problem • Selection and formulation of research problem • Specifying objectives • Formulating hypothesis • Deciding variables 1.2 Research Design Strategies Descriptive studies Analytical studies Experimental studies (Randomized control trials, Non randomized or Non-experimental trials)	6 Hours	1. Classroom Lecture and study 2. Hands-on training 3. Assignment 4. Participative learning 5. Expert Sessions
Unit II	Sampling Design Characteristics of good sample design Implications of sample design Sampling Techniques (Probability or random sampling, Non-probability sampling)	6 Hours	
Unit III	Measurement scales, Research tools and Data Collection Measurement scales, scaling techniques, scale construction techniques Research tools, types of tools; Questionnaire, interview schedule Observation, Construction of Questionnaire/ Schedule Types of data (Primary data and Secondary data, Qualitative and Quantitative data)	6 Hours	
Unit IV	Statistical Analysis Application of parametric tests Application of Non parametric tests Use of computer for data analysis – Knowledge of different types of software for statistical analysis: SPSS and EXCEL.	6 Hours	

Unit V	Scientific Writing of Research report: Scientific writing techniques of the thesis (Norms, format, language and technical rules) Bibliography, Referencing, Style of Referencing and Appendix. Ethics of qualitative research and quality of researcher. Research papers: Norms of writing research papers and articles in National and International Journals.	6 Hours	
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References:

1. Arvind Chandra and T. P. Sexena; Style Mannual for writing: Thesis, Dissertation and Papers in social sciences, New Delhi Metropolitan Book Co.pvt Ltd
2. Bryman A. And Cramer D (1994) Quantitative Data analysis for Social Scientist
3. Best John W and Kahn James B. 1989Research in Education, New Delhi, Prentice Hall of India Private Limited
4. Kerlinger, Foundation of Educational Research
5. Kothari C. R. 1996 Research Methodology-Methods and Techniques, New Delhi. VishwaPrakashan
6. K. Sing, (1986) Techniques and Methods of Social Survey Research and Statistics, Prakashan Kendra, Lucknow.
7. Ingle P.O. (2012) Scientific and Technical Report Writing.
8. Kothari C. R. (2004) Research Methodology : Methods and Techniques, New Age International (P) Limited.

Evaluation Scheme, Passing Standard, and Grading:

a) The evaluation parameters shall be as follows:

- i) MCQ Test: 50 Marks
- ii) Assignment on Guided tool-based learning/Literature Review: 20 Marks
- iii) Attendance, Participation and Reflection: 20 Marks
- iv) Presentation 10 Marks

b) The grading for certification shall be as follows:

- A+ 85 % and above
- A 70 % to 84 %
- B 60 % to 69 %
- C 50 % to 59 %

- c) Successful completion of all course modules and the prescribed evaluation process shall be mandatory for the award of the course completion certificate. Any researcher/learner who fails to fulfil the required contact hours and/or complete the evaluation process shall NOT be eligible for the award of the certificate.

- d) A researcher/learner securing less than 50% marks shall not be awarded the course completion certificate and shall be required to repeat the entire course/programme in accordance with the applicable norms of the university.
- e) The evaluation shall be conducted internally by the respective Research Centre. (Note: The concerned Supervisor shall be responsible for the timely submission of evaluation parameters to the university through the Research Centre.)