

ANNEXURE - 22

Pre-Ph.D. Course Work in Food and Nutrition

Scheme and Syllabi of Examination

for

Pre-Ph. D. Course Work

in

Food and Nutrition

(w. e. f. academic session 2024-2025)

Offered by

BPSIHL

Under

(Faculty of Science)



Bhagat Phool Singh Mahila Vishwavidyalaya

Khanpur Kalan (Sonapat), Haryana-131305

www.bpswomenuniversity.ac.in

06/12/2023

PPDL -701: Research Methodology

L T P
4 0 0 (4 Credits)

Marks for External Exam : 80
Marks for Internal Exam : 20
Total : 100
Time : 3 Hours

Note: The examiner is requested to set **nine** questions in all taking two questions from each unit and one **compulsory** question. The compulsory question will consist of four parts and will be distributed over the whole syllabus. The candidate is required to attempt **five** questions selecting one from each unit and the compulsory question.

UNIT-I

Introduction of Research Methodology: Meaning of research, objectives of research, types of research, significance of research, research and scientific method, research process.

Research Problem: Definition, necessity and techniques of defining research problem. Formulation of research problem. Objectives of research problem.

UNIT-II

Scientific Communications: Publishing Research Papers: Selection of a journal; writing of paper's abstract, formulation of problem, discussion and references, submission and handling of reviewer's comment.

Writing of thesis: Format of a thesis; Review of literature, formulation; Writing methods, results; preparation of Tables, figures; writing discussion; writing conclusion; writing summary and synopsis; Reference citing and listing/Bibliography. Avoiding Plagiarism.

UNIT-III

Computer Applications in Research: Practical aspects of MATLAB, Introduction to LATEX.

MS Office 2007: Word Basics, Mail Merge, Macros, Math Type, Equation Editor

MS Excel 2007: Excel Basics, Data Sort, Functions.

UNIT-IV

Presentation: Poster and Oral. Presentation tools: Introduction to presentation tool, MS Power Point: features and functions, creating presentation, customizing presentation, showing presentation.

Web Search: Internet Basics, Internal Protocols, Pre-requisites, Search Engines, Searching Hints, Using advanced search techniques

Books Recommended:

1. Gurumani, N. (2010), Scientific Thesis Writing and Paper Presentation, MJP Publishers
2. Kothari, C.R. (2010), Research Methodology (Methods and Techniques), New Age International Publishers.
3. Gerald, C.F. and Wheatley, P.O. : Applied numerical analysis, 6th Ed. Addison Wesley (2002)
4. Smith G.D. : Numerical solution of partial differential equations, Oxford University Press (1982)
5. Schwartz H.R., Stiefel: Numerical analysis of symmetric matrices, Prentice Hall (1976)

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PPDLFN- 705: ADVANCES IN FOOD AND NUTRITION

L T P
4 0 0 (4 Credits)

Marks for External Exam : 80
Marks for Internal Exam : 20
Total : 100
Time : 3 Hours

Note: The examiner is requested to set **nine** questions in all taking two questions from each unit and one **compulsory** question. The compulsory question will consist of four parts and will be distributed over the whole syllabus. The candidate is required to attempt **five** questions, selecting one from each unit and the compulsory question.

COURSE OBJECTIVE: To provide an insight of advanced knowledge of Food and Nutrition to the researcher.

COURSE OUTCOMES:

1. To gain knowledge regarding the advances in food additives and toxicants.
2. Be familiar with concept of prebiotics and probiotics and advancement of essential fatty acids.
3. To understand the chemical and physical changes which occur during the production, processing and storage of food and their application

UNIT- I

Interrelation between nutrients, Computer application in clinical nutrition., Non-nutritive components of food: Nutraceuticals, Phytochemicals etc., Food Biotechnology: definition and scope.

UNIT II

Assessment of nutritional status of the community ; current methodologies of assessment of nutritional status , their interpretation and comparative application of the Following: Food consumption, Anthropometry, Clinical and laboratory, Novel protein sources, Concept of Probiotics and Prebiotics, Concept of genetically modified foods.

UNIT III

Community media and method in nutrition education, National Nutrition Policy, Food safety and security.

UNIT IV

Food Packaging: Objectives and types of packaging, Basic packaging material and their protective quality, Advance trends in food packaging

REFERENCES:

- Goldberg I. 1994. Functional foods: Designer foods, Pharma foods, Nutraceuticals. Springer.
Nestle M. 2003. Safe food: Bacteria, Biotechnology and bioterrorism. University of California press.
Winick. 1973. Nutrition & Development, univ. of calombia.
Ecames. 1972. Biology of Nutrition, Palaniuma press
Akoh CC and MinDB. 1998. Food lipids- chemistry, Nutrition and Biotechnology, Marcel Dekker.

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Unit - IV

Databases And Research Metrics : Databases - Indexing databases; Citation databases – Web of Science, Scopus, SCI, etc.; Research Metrics - Impact Factor of journal as per Journal Citation Report, SNIP, SIR, IPP, Cite Score; Metrics : h-index, g-index, i-index, Altmetrics journal database.

Suggested Readings:

1. Bird, A. (2006). Philosophy of Science, Routledge.
2. MacIntyre, Alasdair (1967) A Short History of Ethics, London.
3. P. Chaddah, (2018) Ethics in Competitive Research: Do not get scooped; do not get plagiarized, ISBN:978-9387480865
4. National Academy of Sciences, National Academy of Engineering and Institute of Medicine. (2009). On Being a Scientist: A Guide to Responsible Conduct in Research: Third Edition, National Academies Press.
5. Resnik, D. B. (2011). What is ethics in research & why is it important. National Institute of Environmental Health Sciences, 1-10. Retrieved from <https://www.niehs.nih.gov/research/resources/bioethics/whatis/index.cfm>
6. Bcall, J. (2012). Predatory publishers are corrupting open access. Nature, 489(7415), 179-179. <https://doi.org/10.1038/489179a>

Indian National Science Academy (INSA), Ethics in Science Education, Research and Governance (2019), ISBN:978-81-939482-1-7. <http://www.insaindia.res.in/pdf/EthicsBook.pdf>

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