



# DEPARTMENT OF EDUCATION

## PATNA UNIVERSITY

Bari Path, Dariyapur, Patna - 800 004

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 deptedu@patnauniversity.ac.in  
 Email: doedu.pu@gmail.com

Ref: 132/Ed/19

Date: 25.04.2019

To,

 The Deputy Registrar,  
 Patna University, Patna


कामपूरी - 13

Sub: - Approval of course structure of Pre-Ph.D. course work in Education by Academic Council.

Sir,

Please find enclosed herewith the curriculum for Pre-Ph.D. course work in Education. The existing curriculum has been modified in light of Uniform Ordinance & Regulations, communicated vide letter no. BSU-05/2010-2684/GS(I) dated 21.09.2017. The submitted curriculum is approved by the Departmental Council of P.G. Department of Education, Patna University in its meeting held on 24.04.2019.

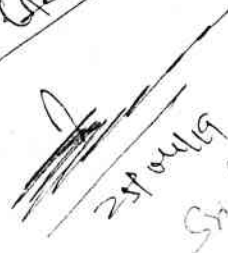
You are requested to place the enclosed curriculum before the Academic Council for approval at the earliest.

With Regards,

  
 (Prof. Khagendra Kumar)

 Head of the Department of Education  
 PATNA UNIVERSITY  
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S.O. (Head)

  
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**FACULTY OF EDUCATION, PATNA UNIVERSITY, PATNA**  
**COURSE STRUCTURE OF Ph.D. PROGRAMME IN EDUCATION**

**COURSE OBJECTIVES**

To enable the students to gain understanding of

- The meaning of scientific method, scientific inquiry, Paradigm, theory and their Implications for educational research.
- The characteristics of philosophical, psychological and sociological and historical researches in education.
- The different strategies of educational research.
- The techniques of developing a research proposal.
- The meaning and techniques of sampling
- The various types of tools of data collection.
- Data analysis using techniques of research both quantitative and qualitative; drawing conclusion, inferences and draw future directions.
- Preparing systematic research report.
- Writing bibliography and references adopting standard international form for different types of referencing pattern

**Paper- I**

**COURSE CONTENTS**

**THEORY 80 marks**

**PART I METHODS OF QUANTITATIVE DATA ANALYSIS**

**UNIT- I**

- Organization and representation of Data: Frequency distribution. Frequency Polygon, Histogram, Ogive, Smoothed Frequency Curve.
- Scales of measurement- nominal, ordinal, Interval and Ratio.
- Concept, calculation and uses of Measures of central tendencies,
  - a) Measures of variability.
  - b) Percentiles and Percentile Ranks
  - c) Normal Probability Curve
- Properties and uses of normal distribution

**UNIT- II**

• **Parametric Test –**

- a) Meaning and purpose of parametric test and non-parametric test and their difference
- b) "t" test, its meaning, purpose; assumptions and uses.
- c) Analysis of variance technique of "F" test.
- d) Analysis of Co-variance technique.
- e) Regression and prediction

• **Non-Parametric Test –**

- a) Chi-square test, its purpose and use.
- b) Median test and sign test.
- c) Correctional technique.

**UNIT- III**

• **Advanced Technique of Correlation.**

- a) Meaning and purpose of correlation.
- b) Pearson's correlation Technique.
- c) Multiple-correlation Technique.
- d) Factor-Analysis Technique

*Praveen Kumar*  
24.4.19

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#### UNIT- IV

- Computer Applications.
- Use of word processing, spreadsheet application, Using formulas and functions, Data storing, Features for Statistical data analysis, Generating charts/ graph and other features. Tools used may be Microsoft Excel, Open office or similar tool, Plotting of graphs.

Introduction to presentation tool, Features and functions, creating presentation, Showing presentation. Tools used may be Microsoft Power Point, Open Office or similar tool.

Internet and its application: E-mail, WWW, Web browsing, Introduction to Internet, Use of Internet and WWW, Using search engine like Google, Yahoo etc, Using advanced search techniques.

#### PRACTICUM 20 marks

- I. Review of one reference book (related to your area of interest/proposed area of research)/ Writing a learned paper on an educational topic (10 marks)
- II. Literature survey on the chosen problem (10 marks)

### FACULTY OF EDUCATION, PATNA UNIVERSITY, PATNA COURSE STRUCTURE OF Ph.D. PROGRAMME IN EDUCATION

#### Paper- II

#### THEORY 80 marks

#### PART I METHODS OF EDUCATIONAL RESEARCH

##### UNIT- I Nature of Research, Knowledge and Inquiry

- Nature and sources of knowledge, scientific inquiry, scientific method.
- Paradigm, theory, model and approach; positivist and non-positivist (humanities) paradigms and their implications for educational research.
- Nature of educational data: Quantitative and Qualitative; Qualitative data: its analysis with emphasis on content analysis; analysis of interview based data and observation based data.
- Philosophical, psychological and sociological and historical orientation in educational research.
- Interdisciplinarity in educational research and its implications.

##### UNIT- II Methods of Educational Research

- Fundamental & Applied Research/Action Research.
- Experimental;
- Philosophical & Historical, survey; Case Study; Developmental; Ethnographic; Documentary-analysis; Ex -post facto.

##### UNIT- III Developing a Research Proposal

- Problem and its sources; Selection and Definition of problem, Review of Related Literature
- Objectives - primary, secondary and concomitant
- Hypothesis - nature, definition, types, sources, characteristics of a good hypothesis; directional and non-directional hypothesis.
- Sampling: Unit of sampling, population; techniques (a) probability sampling techniques & (b) non-probability sampling techniques; Characteristics of a good sample; Sampling errors and how to reduce them; Tables of Random Numbers.

##### UNIT- IV Tools and Techniques of Data Collection & Writing Research Report

- Meaning, Nature, Development and Standardization
- Observation; Interview; Sociometric techniques.

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- Questionnaire, Rating scales; Interview schedules, Attitude scales etc.
- Reliability and validity of various tools and techniques.
- Evaluation of Research: Criteria
- Writing Research Report
- Validity and Limitations of findings; factors influencing validity of research; internal vs. external validity; how to increase validity of research findings.
- Writing Research Report: Technical Structure, Referencing and Bibliography.

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**PRACTICUM 20 marks**

- I. Writing a Research Proposal of Ph.D. study (10 marks)
- II. Development and standardization of one tool of data collection (1 mark)  
(qualitative/quantitative)

**Suggested Readings**

Best, J.W. and Kahn, J. V., Research in Education 7<sup>th</sup> Edn., New Delhi: Prentice Hall of India Pvt. Ltd., 1995.

Cohen, L. & Manion L., Research Methods in Education, London Groom Helm Ltd., 1980.

Corey, S.M. & Shukla J.K., Practical Classroom Research by Teachers, New Delhi: National Institute of Basic Education, 1962.

Edwards, A. L., Experimental Designs in Psychological Research, New York: Holt, Rinehart & Winston Inc., 1960.

Ferguson, G A., Statistical Analysis in Psychology and Education, 5 Ed., Tokyo: McGraw Hill, Kekakusha Ltd., 1981.

Festinger, U and Katz, D. (Eds.) Research Methods in Behavioural Sciences, New York: Holt, Rinehart & Winston 1970.

Fox, J. D., The Research Process in Education, New York: D. Van Nostrand, 1962.

Gage, N.L. (Ed.), Handbook of Research in Teaching, Chicago: Rand McNally, 1963.

Garrett, H.E., Statistics in Psychology and Education, Bombay: Vakils, Feffer And Simons Pvt. Ltd., 1969.

Goode, W. J. and Hill, Method of Social Research in Teaching, Mc Graw Hill, 1952.

Guilford, J.P. & Freachter, B., Fundamental Statistics in Psychology and Education, 6th edn., Tokyo: Mc Graw Hill Kekakusha Ltd., 1978.

Kaul, L. Methodology of Educational Research, New Delhi: Vikas Pub. House, 1994.

Kerlinger, F.N. Foundations of Behavioural Research New York: Holt, Rinehart and Winston Inc. 1973.

Lehmann, I. J. & Mearens W.A. (Eds.), Educational Research Readings in Forces, IBH Publishing Co., 1979.

Lindquist, E.F., Statistical Analysis in Educational Research, New Delhi: Oxford & IBHPublishing Company Co., 1970.

Minium E.W., Statistical Reasoning in Psychology and Education, New York: Willey, 1978.

Moulay G. J., Science of Educational Research, New Delhi: Eurasia. 1964.

Sukhia, S.P., Mehrotra, R.N. & Mehrotra, P.V, Elements of Educational Research, 3 ed., Bombay: Allied Publishers, 1974.

Verma, M., Introduction to Educational and Psychological Research, New Delhi: Asia Publishing House, 1969.

Walker, H.M. & Leo, J. Elementary Statistical Methods, Calcutta: IBH, Publishing Co., 1965.

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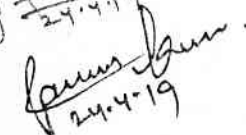
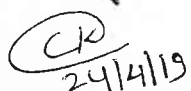
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**P P.G. DEPARTMENT OF EDUCATION  
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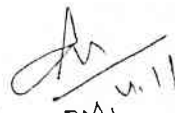
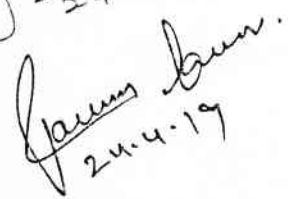
A meeting of the Departmental Council of the P.G. Department of Education, Patna University, Patna was held on 24.04.2019 at 12:30 PM in the official chamber of the Head of the Department of Education, P.U.

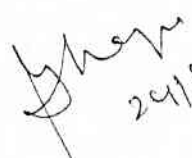
The following members were present:

- |                          |                |  |
|--------------------------|----------------|--|
| 1. Prof. Khagendra Kumar | Chairman       |    |
| 2. Prof. Ashutosh Kumar  | Member         |    |
| 3. Dr. Md. Wasay Zafar   | Member         |    |
| 4. Dr. Jessie George     | Member         |   |
| 5. Pawan Kumar           | Elected Member |   |
| 6. Chandeshwari Kumari   | Elected Member |  |

Resolution;

The members discussed and unanimously approved the course structure of Ph.D. programme in Education.

  
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