

Bodoland University

Ph. D Course Work Syllabus in Education under Faculty of Social Sciences



**Department of Education
Bodoland University
Kokrajhar – 783370**

COURSE CONTENT

| Course Code | Title of the Course | Credits | Internal Exam | End Exam | Total Mark |
|--------------|---|---------|---------------|----------|------------|
| EDN (C): 5.1 | Research Methodology | 4 | 20 | 80 | 100 |
| EDN (C): 5.2 | Statistical Analysis & Computer Application | 4 | 20 | 80 | 100 |
| EDN (C): 5.3 | Higher Education | 4 | 20 | 80 | 100 |
| EDN (C): 5.4 | Teacher Education | 4 | 20 | 80 | 100 |
| EDN (C): 4.5 | Research and Publication Ethics | 2 | - | - | 50 |
| Total | | 18 | 80 | 320 | 450 |

N.B: The course content is for one semester (Six months) consists of five compulsory papers

PAPER CODE: EDN (C): 5.1

PAPER TITLE: RESEARCH METHODOLOGY

Credit- 4

Total Marks = 100 (20+80)

Unit-I: Introduction to Educational Research

- Areas of Educational Research- Problems relating to different stages and sectors of education; Problems related to Teaching and Learning Process
- Formulation of Research Problem: Selection of the problem, Definition of the problem, Statement of the problem, Evaluation of the problem
- Review of related literature: Purpose of the Review, Identification of the Related Literature, Organizing the Related Literature
- Hypothesis: characteristics, types, formulation and testing
- Preparation of Research Proposal
- Research report: style and format of writing, bibliography, reference, appendix, foot notes, typing style
- Contemporary Ethics Issues in Research: Fabrication and Falsification of data; Plagiarism

Unit-II. Sampling Techniques and Research Tools

- Sampling: Concept of Population and Sample, Characteristics of a good sample, Probability and Non- Probability sampling techniques, Sampling errors and how to reduce them
- Construction and Standardization of Questionnaire, Interview Schedule
- Construction and Standardization of Attitude Scale- Likert type

Unit-III. Qualitative Research

- Characteristics of Qualitative Research, Phenomenological Inquiry as the Philosophy of Qualitative Research
- Types of Qualitative Research: Historical, Case study, Ethnography, Phenomenology, Grounded Theory, Tools of Data Collection: Observation & Interview Schedule
- Techniques of Qualitative Data Analysis- Document Analysis, Content Analysis

and Inductive Analysis

- Stages of Qualitative Data Analysis: Data Preparation, Organization, Coding, Describing and Conceptualizing

Unit-IV. Quantitative Research

- Characteristics of Quantitative Research, Logical Positivism as the philosophy of Quantitative Research
- Descriptive Method: Survey & Comparative, Correlational Studies
- Ex-Post -Facto Method, Characteristics, Steps, Strength and weakness
- Experimental Method: Nature, Methods of Control, Internal & External Validity, Experimental Designs

Suggested References:

1. Asthana, B. And Srivastava, V. (2011). Research Methodology. Agrawal Publications.
2. Best J.W. (1999). Research in education. New Delhi: Printice Hall of India Pvt. Ltd.
3. Cohen, L and Manion, L. (1994). Research Methods in Education. London: Routledge.
4. Garrett, H.E. (1973). Statistics in Psychology and Education. Bombay: Vikils, Feiffer & Simon.
5. Good, Barr & Scates (1962). Methodology of Educational Research. New York: Appleton Crofts.
6. Good, Center V (1966) Essentials of Educational Research: Methodology and Design, New York: Applenton Century Crafts Inc.
7. Kelly, A, & Lesh, R. (2000). Handbook of Research Design in Education, Eribaum Associates.
8. Kothari & Garg (2019). Research Methodology: Methods and Techniques. New Age International Publications.
9. Koul, L, (2009), Methodology of Educational Research. Noida: Vikash Publications.
10. Pathak, R.P. (2012). Measurement and Evaluation in Education. Delhi: Dorling Kindrsley.
11. Patton. M. Q. (2002). Qualitative Research. Columbus, ott: Merrill, Prentice Hall.
Sharma, Bharti. (2004). Methodology of Educational Research. New Delhi: Vohra Publishers and Distributers.
12. Sharma, S.R. (2003). Problems of Educational Research. New Delhi: Anmol

Publications, Pvt. Ltd.

13. Van Dalen, D.B. (1962). Understanding Educational Research. New Jersey: McGraw Hill.

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PAPER CODE: EDN (C): 5.2

PAPER TITLE: STATISTICAL ANALYSIS AND COMPUTER APPLICATIONS

Credit- 4

Total Marks = 100 (20+80)

Unit-I. Introduction of Statistics

- Need and use of statistical analysis in education
- Understanding and using the statistics in research
- Organization of Data: Frequency distribution
- Measure of Central Tendency: Mean, Median & Mode
- Measure of Variability: Range, Quartile Deviation, Mean Deviation, Standard Deviation

Unit-II. Statistical Analysis of Parametric & Non-Parametric Test

- Concept of Standard Error of Mean and Difference of Means, One tailed and Two-tailed test.
- t- test for testing the significant of difference between Two Means for Independent & Large Correlated Sample
- Application of Variance (one way and two way ANOVA)
- Analysis of Co-variance (ANOCOVA)
- Application of Chi-Square Test (Equal distribution, Normal distribution and Independence)

Unit-III. Statistical Analysis of Correlation

- Biserial & Point Biserial Correlation
- Partial and Multiple Correlation
- Regression Equation: Regression and Prediction.

Unit - IV Computer Data Analysis

- Application of MS-Office: Basic of MS-Words, MS-Excel and MS-PowerPoint, making entries of data in Excel-Sheet &
- SPSS, Graphical presentation
- Computing t-value & its significance
- Computing F-value & its significance

Suggested References:

1. Garrett H.E. (1965) Statistic in Psychology and Education, New York Mcgraw.
2. Guilford, J.P. (1973) Fundamental Statistics in Psychology and Education New York: MacGraw Hill Book Company.
3. Kothari & Garg (2019). Research Methodology: Methods and Techniques. New Age international Publications.
4. Koul, Lokesh. (2009). Methodology of Educational Research, Noida, Vikash Publishing house.
5. Merrill, P.F, et.al, (1985). Computers in Education, (Second Edition), Allyn and Bacon: New York.
6. Peter Norton. (2000). Introduction to Computers, Tata McGraw Hill Publication, New Delhi.
7. S.K. Mangal (2019). Statistics in Psychology and Education. PHI Learning Private limited, Delhi.
8. Sidhu. S. K. (2007). Statistics in Education and Psychology. Sterling Publishers PVT. LTD, New Delhi.
9. Sinha P.K. (1992). Computer Fundamentals, BPB Publications New Delhi.

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PAPER CODE: EDN (C): 5.3

PAPER TITLE: HIGHER EDUCATION

Credit- 4

Total Marks = 100 (20+80)

Unit-I Introduction to Higher Education

- Meaning and goals of Higher Education
- Constitutional provisions and Policy Perspectives in Higher Education
- Emerging Trends in Higher Education
- Higher Education and Socio-Economic Development

Unit-II. Policies in Higher Education

- Policy Formulation and Implementation of Policies in Higher Education: National Policy on Education- 1986, POA, 1992, Draft National Policy on Education 2016, Rights of People with Disability Act, 2016
- University Education Commission (1948-49), International Commission on Education for the 21st century (Delors Commission), National Knowledge Commission (2009)
- Rashtriya Uchchar Shiksha Abhiyan (RUSA), Indian Council of Social Science Research (ICSSR)

Unit- III. Contemporary Issues

- Quality and Excellence, Autonomy, Accountability, Political interference, Discipline, Employability, Placement and Research outcome
- Evaluative programmes in Higher Education: Status, mechanics and procedures
- Innovative Programmes in Higher Education
- Trends of Research in Higher Education

Unit-IV. ICT in Higher Education

- Concept and importance of ICT in Educational Research
- Recent Trends of ICT in research: e - research, e - book, e - journals, e - database, e- peer review, e- reference, e- publication, ISSN, ISBN
- Legal and Ethical Issues in use of ICT: Hacking, Violation of Copyright, download of social networking sites

Suggested References:

1. Agarwal, P. (2009); Indian Higher Education: Envisioning the Future: India: Sage Publication
2. Akther, N. (2000); Higher Education For the Future, Jaipur: Rawat Publications.
3. Amrit Lal Vohra & Sharma S.R (1990), Management of Higher Education in India, New Delhi: Anmol Publications.
4. Arya, P.P (2006). Higher Education and Global Challenges Systems and Opportunities. New Delhi: Deep & Deep Publication Pvts. Ltd.
5. Chalaam, K.S. (2005); Challenges of Higher Education, New Delhi: Anmol Publications.
6. Dhir, R.N. (2002). Higher Education in the New Millennium. Chandigarh: Abhishek Publication.
7. Khirwadkar, A. (2005). Information & Communication Technology in Education. New Delhi. Sarup & Sons.
8. Naik, J.P. (1965); Educational Planning in India, Bombay: MacMillian.
9. Powar, K.B. (2002). Indian Higher Education. New Delhi: Concept Publishing Company.
10. Ram, A. (2009); Higher Education in India, Issues & Perspectives, New Delhi: Mittal Publications.
11. Sharma, R.S. (1995); Higher Educatio, Scope & Development, New Delhi: Commonwealth Publishers.
12. Shukla, C. (2004); Financing of Higher Education, New Delhi: APH.

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PAPER CODE: EDN (C): 5.4

PAPER TITLE: TEACHER EDUCATION

Credit- 4

Total Marks = 100 (20+80)

Unit-I. Introduction to Teacher Education

- Meaning and Scope of Teacher Education
- Aims and Objectives of Teachers education at Elementary, Secondary and Higher Secondary levels
- Development of Teacher Education in India before and after Independence

Unit-II. Revamping Teacher Education for Quality Improvement

- Innovations and reflection in Teacher Education
- Recent trends in Teacher Education and Present Scenario
- Role of UGC, NUEPA, NAAC, NCTE, NCERT, SCERT, DIET for the development and innovative approach in Teacher Education
- Emerging Issues and Challenges, Research trends in Teacher Education

Unit-III. Issues and Concerns in Teacher Education

- Issues in Special Education and Integrated Teacher Education
- Issues, Concerns and Problems of Teacher Education in India
- National Curriculum Framework-Concerns on Teacher Education, NCFTE-2009
- Privatization, Globalization and Autonomy in Teacher Education

Unit-IV. Professionalism and Research in Teacher Education

- Teaching as a Profession
- Professional Ethics of a Teacher
- Performance Appraisal of Teachers
- Accountability of Teachers
- Research in Teacher Education: Teaching Behaviour, Teacher Effectiveness and Approaches to Teaching, Service Conditions and Job Satisfaction, Quality Maintenance, Evaluation Strategies

Reading References:

1. Anand , C.L. (1988). Aspects of Teacher Education. Delhi: S. Chand and Co.
2. Beck, C. & Clark K. (2006). Innovations in Teacher Education: A Social Constructivist Approach. New York: State University of York.
3. Kauts, A. (2013). Quality Concerns Education. Patiala: 21st Century Publication.
4. Lampert, M. (2001). Teaching problems and the problems of teaching. New Haven: Yale University Press.
5. Linda Darling Hammond & John Bransford (ed) (2005). Preparing Teachers for a Changing World. Jossey-Bass, San Francisco
6. Loughran, J. (2006). Developing a Pedagogy of Teacher Education: Understanding Teaching and Learning about Teaching. New York.: Routledge:
7. Mukerjee, S.N. (1988). Education of the Teacher in India, Vol. I & Vol. II, Delhi: S. Chand and Co.
8. NCTE (1998). Competency Based and Commitment Oriented Teacher Education for Quality School Education: Pre-Service Education.
9. NCTE (1978). Teacher Education Curriculum-A Framework, New Delhi: NCERT.
10. Panda, B.N & Tewari, A.D (1997). Teacher Education, New Delhi: A.P.H. Publishing Corporation.
11. Pareek, R. (1996). Role of Teaching Profession, Guwahati: Eastern Book House.
12. Passi, B. K. (1976). Becoming a Better Teacher, microteaching Approach, Amedabad: Sahitya Mudranalaya
13. Raina, V.T. (1998). Teacher Education: A Perspective, Guwahati: Eastern Book House.
14. Rao (1998). Teacher Education in India. New Delhi: Discovery Publishing House.
15. Singh, L.C. (ed) (1990). Teacher Education in India- A Resource Book, New Delhi: NCERT.
16. Yadav, M.S. & Lakshmi, T.K.S. (2003). Conceptual Inputs for Secondary Teacher Education: The Instructional Role. India: NCTE.

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PAPER CODE: EDN (C): 5.5

PAPER TITLE: RESEARCH AND PUBLICATION ETHICS

Total Marks: 50

Credit-2

Course structure

- The course comprises of six modules listed in table below. Each module has 4-5 units.

| Modules | Unit title | Teaching hours |
|-----------------|--------------------------------|----------------|
| Theory | | |
| RPE 01 | Philosophy and Ethics | 4 |
| RPE 02 | Scientific Conduct | 4 |
| RPE 03 | Publication Ethics | 7 |
| Practice | | |
| RPE 04 | Open Access Publishing | 4 |
| RPE 05 | Publication Misconduct | 4 |
| RPE 06 | Databases and Research Metrics | 7 |
| | Total | 30 |

Syllabus in detail

THEORY

- **RPE 01: PHILOSOPHY AND ETHICS (3 hrs.)**
 1. Introduction to philosophy: definition, nature and scope, concept, branches
 2. Ethics: definition, moral philosophy, nature of moral judgements and reactions
- **RPE 02: SCIENTIFIC CONDUCT (5hrs.)**
 1. Ethics with respect to science and research
 2. Intellectual honesty and research integrity
 3. Scientific misconducts: Falsification, Fabrication, and Plagiarism (FFP)
 4. Redundant publications: duplicate and overlapping publications, salami slicing
 5. Selective reporting and misrepresentation of data
- **RPE 03: PUBLICATION ETHICS (7 hrs.)**
 1. Publication ethics: definition, introduction and importance
 2. Best practices / standards setting initiatives and guidelines: COPE, WAME, etc.
 3. Conflicts of interest
 4. Publication misconduct: definition, concept, problems that lead to unethical behavior and vice versa, types
 5. Violation of publication ethics, authorship and contributorship
 6. Identification of publication misconduct, complaints and appeals
 7. Predatory publishers and journals

PRACTICE

- **RPE 04: OPEN ACCESS PUBLISHING(4 hrs.)**

1. Open access publications and initiatives
2. SHERPA/RoMEO online resource to check publisher copyright & self-archiving policies
3. Software tool to identify predatory publications developed by SPPU
4. Journal finder / journal suggestion tools viz. JANE, Elsevier Journal Finder, Springer Journal Suggester, etc.

- **RPE 05: PUBLICATION MISCONDUCT (4hrs.)**

- A. Group Discussions (2 hrs.)**

1. Subject specific ethical issues, FFP, authorship
2. Conflicts of interest
3. Complaints and appeals: examples and fraud from India and abroad

- B. Software tools (2 hrs.)**

Use of plagiarism software like Turnitin, Urkund and other open source software tools

- **RPE 06: DATABASES AND RESEARCH METRICS (7hrs.)**

- A. Databases (4 hrs.)**

1. Indexing databases
2. Citation databases: Web of Science, Scopus, etc.

- B. Research Metrics (3 hrs.)**

1. Impact Factor of journal as per Journal Citation Report, SNIP, SJR, IPP, Cite Score
2. Metrics: h-index, g index, i10 index, altmetrics

References

- Bird, A. (2006). *Philosophy of Science*. Routledge.
- MacIntyre, Alasdair (1967) *A Short History of Ethics*. London.
- P. Chaddah, (2018) *Ethics in Competitive Research: Do not get scooped; do not get plagiarized*, ISBN:978-9387480865
- 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.
- 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>
- Beall, 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/Ethics_Book.pdf