Ph.D. (Education)
(Regular Mode)

Session 2018-19 Onwards

DEPARTMENT OF EDUCATION
IGNTU, AMARKANTAK (MP)

Ph.D. (EDUCATION) COURSE WORK

Semester I

Course No	Course Name	Credit	Hours	Marks
Ph.D. 101	Research Methodology	5 (4+1)	60+30	60+40
Ph.D. 102	Application of Computer in Educational Research	5 (4+1)	60+30	60+40
Ph.D. 103	Broad Field (Based on the Area(s) of Research, the syllabus will be designed and developed by the Concerned Supervisor) a) Tribal Education c) Educational Psychology d) Language Education e) Six-Sigma and Academic Tenacity f) Educational Technology g) or any other	5 (4+1)	60+30	60+40
	Total	**15**	180+90 (**270**)	**180+120 (300)**

Semester - I

	Marks			Credits		
	Theory	**Practicum**	**Total Marks**	**Theory**	**Practicum**	**Total Credits**
Semester - I	180	120	300	12	3	15

Practical: **Assignments, Presentations, Activities (Paper Based)**

Admission Criteria: **As per IGNTU Norms, Ref.IGNTU/990/2016,**

Date: 25/11/2016 (Annexe –I)

RESEARCH METHODOLOGY AND STATISTICS IN EDUCATION

Paper- 101

Credits: Four (4+1)
Maximum Marks= 100
Theory= 60, Practical= 40

Objectives:

- To explores research in the field of education.
- To equip the students to examine the philosophical and socio-cultural context of research and relate it to the contemporary paradigm shift.
- To explore different traditions such as empiricism, rationalism and constructivism etc.
- To investigate educational processes, systems and institutions.

Unit 1: Educational Research **12 Hrs**

- Meaning , Nature, Scope and Importance of Research
- Types of Research: Qualitative and Quantitative Research
- Ethics in Research and Plagiarism
- Selection and Formulation of Research Problem
- Steps, Function and Importance of Literature Review
- Objectives, Hypotheses and Variables

Unit 2: Research Designs **14 Hrs**

- Concept of Population and Sample
- Methods of Sampling
- Quantitative Research Designs: Experimental, Non experimental research Design: descriptive, Correlation, Survey and Ex post facto research. External and Internal Validity of Quantitative design
- Qualitative Research Designs: Case Study, Ethnographic and Analytical (Historical). External and Internal Validity of Qualitative design

Unit 3: Tool Construction, Data Collection and Report Writing **12 Hrs**

- Construction and adaptation of tool: Observation, Questionnaire, Interview, Inventory, Rating Scale etc.
- Types of Data: Primary and Secondary
- Data Collection Technique
- Organization of Research Report
- Preliminaries, Content of report, reporting Style, Bibliography, Appendices
- Criteria for the evaluation of the Research Report

Unit 4: Parametric Statistics **12 Hrs**

- Test Scales: standard scores, the T & C scale and Stanines
- Measures of Relationships: concept and computation of co-efficient of correlation, Bi-serial, point biserial and phi coffecient. Multiple correlation, Regression equation and Prediction.
- Analysis of variance and co-variance-concept and computation
- Factor Analysis: nature and basic assumptions of factor analysis and its application.

Unit 5: Non-Parametric Statistics **10 Hrs**

- Concept and computation of Sign test, X^2-test, Sign-Rank test of Differences, Composite-Rank method, K-S Test with small and large samples.

Activities

Each scholar has to undertake at least two of the following activities; prepare the report and present the report in the seminar.

1. Preparing a Research Proposal.
2. Review of research in a particular area based on the abstracts of survey of research in education.
3. Establishment of the reliability of any psychological test and its interpretation.
4. Preparing references in APA Style on two each on the following an analytical report regarding the variation in them: (a) Single author book (b) More than two authors book (c) Edited Book (d) Chapter in Edited Book (e) Journal article (f) Unpublished thesis/presentation/manuscript
5. Conducting a detailed survey on educational status of a village of not less than 50 households.
6. Any other activity that the course incharge recommends.

Suggested Readings:

- Flyvbjerg, Bent (2001). Making Social Science Matter: Why Social Inquiry Fails and How it can Succeed Again, UK: Cambridge University Press.
- Robson, C. (2002). *Real World Research*. 2nd Edition. Oxford:Blackbell.
- Kumar, Renjith (2009). *Research Methodology: A Step by Step Guide for Research*, Delhi: Pearson Education.
- Creemers, B. (2010). *Methodological Advances in Educational Effectiveness Research*. London: Routledge.
- Creswell, J.W. (2013). *Qualitative Inquiry and Research Design: Choosing among Five Approaches*.3rd edition. Thousand Oaks, CA:Sage.
- Mertens, D.M. (2015). *Research and Evaluation in Education and Psychology: Integrating Diversity with Quantitative, Qualitative and Mixed Methods*. Thousand Oaks, CA: Sage Publication.

ICT AND ITS APPLICATION IN EDUCATION
Paper- 102

Credits: Four (4+1)
Maximum Marks= 100
Theory= 60, Practical= 40

Objectives

- To enrich the concepts of Educational Technology and ICT in Education
- To understand the application of web 2.0 and web 3.0Technologies and ICT in teaching and learning process.
- To explore the tools of ICT and to enable the researcher to develop necessary skill of current and future trends in Educational technology.
- To understand the concept of MOOC and to develop video based modules like MOOC.
- To become a critical user of ICT and to get equipped with various presentation tools.
- To enable the Researchers to compare various software's and their applications in education.
- To enrich knowledge on Research Trends in ICT

Unit- 1 Educational Technology **12 Hours**

Meaning- Definition- Objectives- Scope, Significance and Approaches
Role of technology in modern educational practices and in the classroom
Web 2.0 and Web 3.0 technologies for classroom - advantages
Learning concepts behind Web 3.0 - educational responses

Unit-2 ICT Application **14 Hours**

ICT-meaning, nature and importance
Microsoft Word and its uses, Microsoft excel and its uses, Microsoft PowerPoint,
Prezi – how to make a presentation and execute it.
SPSS and its uses,
Massive Open Online Courses - Stanford Online, Coursera, edx, NPTEL, SWAYAM and Wiki.

Unit-3 Current Trends in ICT **10 Hours**

Social Media as a Teaching and Learning tool , iPads / tablets , Use of video to create global connections, The Flipped Classroom; Innovative Apps for Parent-Teacher Communication, Smart Boards – Usage and application and review of research articles related to smart board.

Unit-4 Educational software **10 Hours**

Educational Softwares –
Hot potato, Google classroom, Survey Monkey, Moodles

Unit-5 Research Trends in ICT **14 Hours**

Critical analysis and contributions of current researches in Educational and Instructional Technology.
Analysis of ICT integration models in educational Institutions and research contribution in the field of Educational and Instructional Technology to enhance teaching and learning.

MODE OF TRANSACTION: Lecture, Brainstorming, Review of Research Articles, Experiential learning & flipped classes.

PRACTICUM: Based on the area of research the practicum will be designed by the teacher along with assignment on SPSS and video modules development.

REFERENCES

Aggarwal D.D,(2004), Educational Technology, Sarup and Sons

Aggarwal. C. J, (2009), Educational Technology, Vikas Publishing House,

AvrilLoveless,VivEllis(2001) ICT, Pedagogy and the Curriculum: Subject to Change. Routledge.

Barseghian,T (2011). How Learning Environments are Changing.

Bruner,J.S,(1963)TheProcessofEducation,NewYork:VintageBooks.

Clarke C. (2014) Google's Latest Education Innovation: Google Classroom.

Edwards Anthony, (2012) New Technology and Education (Contemporary Issues in Education Studies)

Ellis Viv, (2001) ICT, Pedagogy and the Curriculum: Subject to Change

Fallows S. and Bhanot R. (2005) Quality Issues in ICT-Based Higher Education.Routledge.

Heinecke Walt, Adamy Pete, (2010)Evaluating Technology in Teacher Education: Lessons from the Preparing Tomorrow's Teachers for Technology

Jo Shan Fu (2013) ICT in Education: A Critical Literature Review and Its Implications.International Journal of Education and Development using Information and Communication Technology, Vol. 9, No. 1, April 1, 2013 .

Kemp C. (2014)The current and future trends in Educational Technology.

Kennewell S. (2004) Meeting the Standards in Using ICT for Secondary Teaching.

Kennewell S; Parkinson J; Tanner H.(2003) Learning to Teach ICT in the Secondary School: A Companion to School Experience Routledge Falmer.

Krishnamurthy R.C,(2003)EducationalTechnology:ExpandingOurVision,Authorspress,Delhi,.

Kumar, K L (1997).Educational Technology: A Practical Textbook for Students, Teachers, Professionals and Trainers. New Delhi

MarmarMukhopadhyay,(2004)(ED)EducationalTechnology:KnowledgeAssessment,Shipra,Delhi

MujibulHasanSiddiqui(2008)EducationalTechnology,APHPubNewDelhi.

PandeyV.C.,(2005)(ED)EducationalTechnology.,IshaBooks, Delhi

Prasad Janardan ,KaushikKumari Vijay, (2002)Advanced Educational Technology, Kanishka Publisher

PurabiJain,(2004)EducationalTechnology,Dominant,NewDelhi.

R. Imran. Shaikh (2013)Introduction to Educational Technology & ICT

RajniBala(Edt),(2006)EducationalTechnology, Alfa,NewDelhi,

RamNathSharmaandS.S.Chandra(2003)AdvancedEducationalTechnology,.AtlanticNew Delhi.

Rao. K. V.(2003), Educational Technology, APH Publishing

Rodriguez, P.; Nussbaum, Miguel; Lopez, Ximena; Sepulveda, Marcos , (2010) A Monitoring and Evaluation Scheme for an ICT-Supported Education Program in Schools. Educational Technology & Society, Vol. 13, No. 2, April 2010 . RoutledgeFalmer.

SankhalaD.P,(2006) Educational Technology, Adhyayan, New Delhi.

SatyaPalRuhela (Edt)(2002) Education Technology, Indian Pub Delhi.

Schwartz E. James, Beichner Robert J(1999): Essentials of Educational Technology; Allyn and Bacon,

Selwyn Neil,(2013) Education in a Digital World: Global Perspectives on Technology and Education